UNITED STATES DISTRICT COURT

EASTERN DISTRICT OF PENNSYLVANIA

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| PATRICK McDERMID, Individually and on Behalf of All Others Similarly Situated,<br><br>Plaintiff,<br><br>vs.<br><br>INOVIO PHARMACEUTICALS, INC., et al.,<br><br>Defendants. | Civ. Action No. 2:20-cv-01402-GJP<br><br>CLASS ACTION<br><br>SECOND AMENDED CONSOLIDATED CLASS ACTION COMPLAINT FOR VIOLATION OF THE FEDERAL SECURITIES LAWS<br><br>DEMAND FOR JURY TRIAL |

## INTRODUCTION AND OVERVIEW

1. Lead Plaintiff Manuel S. Williams and Andrew Zenoff ("Plaintiffs") hereby bring this action on behalf of themselves and all persons or entities who purchased or otherwise acquired the common stock of Inovio Pharmaceuticals, Inc. ("Inovio" or the "Company") between February 14, 2020 and August 10, 2020, inclusive (the "Class Period"), and were damaged thereby. Excluded from the Class, as defined below, are Defendants, who are also defined below, present or former executive officers of Inovio and their immediate family members (as defined in 17 C.F.R. §229.404, Instructions (1)(a)(iii) and (1)(b)(ii)). Plaintiffs seek to recover damages caused by Defendants' violations of §§10(b) and 20(a) of the Securities Exchange Act of 1934 ("Exchange Act"), and Rule 10b-5 promulgated thereunder. Defendants have engaged, and continue to engage, in an ongoing scheme to defraud investors regarding the status of the Company's COVID-19 vaccine and Inovio's capability to deliver necessary doses in 2020 and beyond.

2. Plaintiffs allege the following based upon personal knowledge as to themselves and their own acts and upon information and belief as to all other matters. Plaintiffs' information and belief is based on, *inter alia*, the independent investigation of their counsel, Robbins Geller Rudman & Dowd LLP. This investigation included, but was not limited to, a review and analysis of: (i) the results of Inovio's clinical trials of the COVID-19 vaccine known as INO-4800; (ii) Inovio's public filings with the U.S. Securities and Exchange Commission ("SEC"); (iii) transcripts of Inovio's public conference calls; (iv) Inovio's press releases; (v) independent media reports regarding Inovio; (vi) economic analyses of Inovio's stock price movement and pricing and volume data; (vii) consultations with relevant experts; (viii) other publicly available material and data identified herein; and (ix) documents produced to date in the litigation.

3. Counsel's investigation of the facts underlying this action continues, and counsel further believes that relevant facts are known only by Defendants or are exclusively within their

custody or control. Plaintiffs believe that additional evidentiary support will exist for the allegations set forth herein after a reasonable opportunity for additional discovery.

4. Inovio, founded in 1979, focuses on the discovery, development, and commercialization of deoxyribonucleic acid ("DNA") medicines to treat, cure, and protect people from diseases associated with human papillomavirus ("HPV"), cancer, and infectious diseases. Since its formation 40 years ago, the Company has not received marketing approval for any drug or biological agent. With the onset of the coronavirus epidemic, the Company's primary focus has been on the development of the vaccine called INO-4800. As of June 2020, the Company had completed one Phase I trial of INO-4800.

5. In January 2020, the country first learned that SARS-COV-2 (the "Coronavirus" or the "Virus") had invaded its shores. Since the discovery of that first infection, the number of people living in the United States who have either contracted the disease or died due to COVID-19 infection has grown exponentially. When this case was commenced, 1,300 Americans had been infected and 40 deaths had been recorded. As of September 2020, over 6.7 million Americans had been infected and over 200,000 had perished. As a consequence of the growing pandemic, governments, biopharmaceutical companies and academia across the globe engaged in an accelerated effort to develop a vaccine (or a group of them), which if safe and effective, was expected to begin distributing globally by the end of 2020. The goal was aggressive. It usually takes 10 years or more to bring an effective and safe vaccine to the market and oftentimes scientists are unable to develop an effective vaccine after decades of effort. As most people are aware, the Common Human Coronavirus (which is a form of the common cold) has been with society for hundreds, if not thousands of years, and no cure has been found to date.

6. Shortly after obtaining the DNA sequence of the Coronavirus in January 2020, Inovio designed a vaccine construct to address the growing pandemic. The Coronavirus represents the

biggest healthcare challenge in decades. Accordingly, Defendants viewed the development as a huge opportunity for the Company. First, it would allow Inovio to further showcase its purported capabilities with other DNA-based vaccines, including those to treat the MERS and SARS-COV-1 indications. Second, even if Inovio's COVID-19 vaccine candidate – known as INO-4800 – did not prove to be safe and effective, Defendants had both the motive and opportunity to take advantage of investors desperately looking for a stock that may prove to be profitable while the U.S. economy was being negatively impacted by the pandemic. And Defendants did just that: Raising over $320 million in cash in a few short months as Inovio's stock price rocketed in response to Defendants' false and misleading Class Period statements regarding the status of INO-4800 and the Company's ability to generate sufficient doses. In addition to successfully raising hundreds of millions of dollars from investors in several stock offerings to fund clinical development activities and operations supporting clinical development of all drugs other than INO-4800, defendants J. Joseph Kim and Peter D. Kies also took advantage of their misleading statements and sold 170,000 shares of Inovio stock at artificially inflated prices for insider trading proceeds of nearly $4 million.

7. During the Class Period, Defendants made false and misleading statements regarding the development of the INO-4800 vaccine and the Company's ability to produce one million doses of the vaccine by the close of 2020, and hundreds of millions of doses each year thereafter. Specifically, on February 14 and March 2, 2020, Defendants publicly claimed that the Company had "construct[ed] our vaccine . . . in about three hours," and "we were able to fully construct our vaccine within three hours," respectively.

8. On March 24, 2020, Defendants assured investors that the U.S. Department of Defense ("DoD") had paid one of the Company's purported virus manufacturers (Ology Bioservices, Inc. ("Ology")) $11.9 million to facilitate Inovio's "technology transfer to rapidly manufacture DNA vaccines" and added that the partnership with Ology "'increases Inovio's manufacturing capabilities

for [INO-4800] and establishes an additional DNA vaccine manufacturing facility to protect the U.S. military.'"

9. On May 11, 2020, J. Joseph Kim assured investors that Inovio was "on track" to deliver one million doses in 2020, and hundreds of millions of doses beginning in 2021 and beyond, by "relying on our current contract manufacturers of plasmids and adding on additional manufacturers that can help us scale." The next day, Inovio commenced yet another stock offering for $100 million. The Form 424B5 Prospectus, filed on May 12, 2020, said nothing about the fact that the Company's sole provider of the vaccine, VGXI, Inc. ("VGXI"), had cancelled its contract with Inovio and the Company had already determined that delivery of the promised doses was "mathematically impossible" unless VGXI could be forced to hand over its vaccine manufacturing intellectual property and technology to VGXI's competitors across the globe, including in China and India.

10. On June 30, 2020, Inovio issued a press release entitled "INOVIO Announces Positive Interim Phase 1 Data for INO-4800 Vaccine for COVID-19," which included the statements "INOVIO to begin U.S. Phase 2/3 efficacy study this summer upon regulatory concurrence" and "Inovio has expanded its Phase 1 trial to add older participants in additional cohorts and plans to initiate a Phase 2/3 efficacy trial this summer upon regulatory concurrence." The press release further quoted Kim stating: "'We are very encouraged by the positive interim safety and preliminary cellular and humoral response results to date . . . .'"

11. On August 10, 2020, Defendants issued a press release entitled "INOVIO Reports Second Quarter 2020 Financial Results; Provides DNA Medicines Clinical Program Mid-Year Update." In the press release, Kim is quoted stating that the Company was "starting our Phase 2/3 COVID-19 clinical study in the U.S. in September." Following the press release on August 10, 2020, Inovio hosted a conference call with investors and analysts. During the conference call, the

first question submitted to Defendants was about the commencement of the Phase II/III trial: "I'm just curious if you could perhaps comment on the current gating factors for getting that going. It sounds like you're targeting a September start, maybe just slightly a delay from maybe previous commentary. So I just want to understand maybe what the pushes and pulls are there." In response Kim stated:

> Yes. Thank you, Greg. So we've been working urgently to get our Phase II/III events. We are in very active discussions with the FDA on the design, and we feel that we are very close to this process. So in terms of drug doses, we have everything available to execute. In terms of the devices, we have everything – we have very encouraging and positive Phase I data, which is undergoing peer review. So we feel like we are executing on this. Obviously, we are concurrently working on getting an external funding to support this large trial. So please stay tuned because we will be able to, certainly by September, announce the Phase II/III start with external funding in this regard.

Later during the call, another analyst followed up with Kim: "And then just lastly – and I guess it was kind of asked at the outset, but I guess you characterized the initiation of the II/III as kind of being dependent upon receiving FDA concurrence. I guess can you maybe just talk a little bit about what that FDA concurrence looks like?" In response, Kim stated:

> Yes. So FDA concurrence just means it's an actual term for FDA approval of any process in process steps. Nothing is actually approved. IND isn't approved. It's concurred or you're allowed to go forward. So it's just a terminology. So we could have easily have used colloquial language of, yes, upon getting FDA okay to move to the next steps.

12. Defendants' false and misleading statements had their intended effect. Between February 14 and March 6, 2020, Inovio's stock price rocketed from $4.15 per share to $14.09. Between March 24 and May 13, Inovio's stock price continued to climb from $7.09 per share to $13.65 per share. By June 30, 2020, the Company's stock price traded over $31.00 per share. Defendants took advantage of the artificial inflation to the Company's stock price caused by numerous misleading statements. In fact, between February and June 2020, Inovio raised over $320 million in cash through a series of dilutive at-the-market ("ATM") offerings, capital desperately

needed to cover Inovio's research and development ("R&D") efforts. Defendants J. Joseph Kim and Peter D. Kies also lined their own pockets, earning millions of dollars in salary, bonuses and long-term equity incentive compensation that were predicated on, *inter alia*, rapid vaccine development, raising funds in several ATM offerings and publishing the results of the pre-clinical and clinical trials of INO-4800. They also sold millions of dollars of Inovio common stock in a few short weeks following the Company's June 30, 2020 press release.

13. Each time Defendants made misleading statements regarding INO-4800, the true facts about the development of the vaccine and the Company's ability to produce sufficient doses began to be revealed to market participants. For instance, on March 9, 2020, the Company was forced to correct Defendants' claims that Inovio had fully constructed a vaccine in three hours, admitting that J. Joseph Kim really meant that Inovio had merely "designed" a vaccine construct within three hours. The response to Defendants' admission was swift and severe. By close of trading on March 10, 2020, the Company's stock price had cratered from a March 9, 2020 opening of $18.72 per share to $5.70, on heavy trading volume.

14. On June 3, 2020, Inovio made its lawsuit against VGXI public, despite the Company's prior efforts to seal from public view material adverse facts in that case regarding Inovio's true ability to deliver doses to the public. Inovio initiated the case because VGXI had cancelled its contract with Inovio on May 7, 2020, and due to VGXI's refusal to hand over its intellectual property and technology to competitors, it was "mathematically impossible" for the Company to deliver one million doses of INO-4800 by the end of 2020 (let alone hundreds of millions of doses in 2021 and beyond). Further, documents filed with the court revealed that Defendants had known, prior to the Class Period, that it was virtually impossible to deliver the doses that Defendants had both planned and advised investors. Disclosure of the Company's factual assertions in the June 3, 2020 complaint were met with additional declines in Inovio's common stock

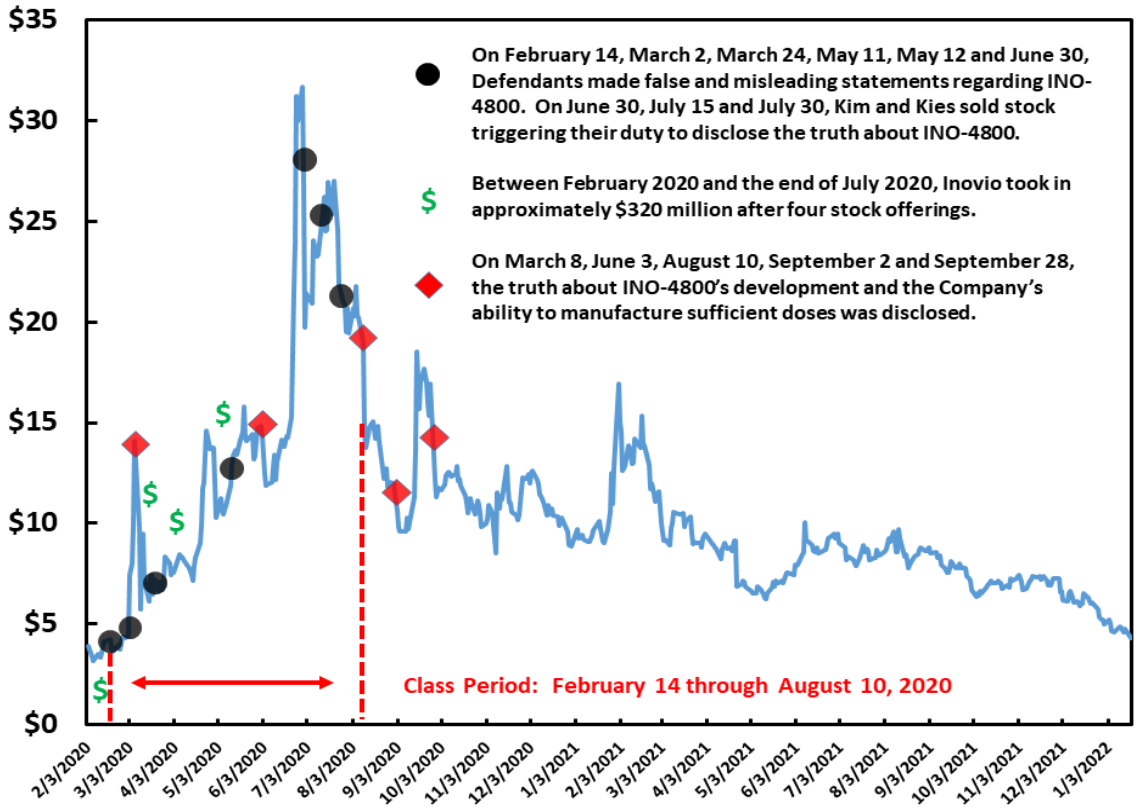
price. By the close of trading on June 4, 2020, the Company's stock price had dropped from a June 2, 2020 closing price of $14.34 per share to $11.88, on heavy trading volume. As a result of this stock price decline and in an effort to keep Inovio's stock price artificially inflated, Defendants publicly issued a series of "standby statement[s]" assuring investors that the VGXI dispute would be resolved shortly, was just a "bump in the road" and that, despite the allegations in the court filings, Inovio remained on track to manufacture INO-4800.

15. On August 10, 2020, Inovio hosted a conference call with analysts and investors. During the call, Kim refused to answer questions about the VGXI case or reaffirm the assurances made in the "standby statement[s]." As opposed to his prior claims that Inovio remained on track with the manufacturing of INO-4800, Kim would only acknowledge that "our focus is squarely on scaling up for 100 million doses that we feel are needed in 2021." With regard to the INO-4800 clinical trials, in the press release and conference call, Defendants disclosed that its planned INO-4800 Phase II/III trial would begin in September 2020 upon U.S. Food and Drug Administration ("FDA") concurrence, which indicated there had been a delay from the prior guidance of "summer" of 2020 (*see* ¶113, *infra*). By the close of trading on August 11, 2020, the Company's stock price had dropped from an August 10, 2020 closing price of $18.99 per share to $14.62, on heavy volume.

16. On September 2, 2020, before the market open, the stock analyst firm Muddy Waters Research ("Muddy Waters") issued a Tweet regarding Inovio. The Tweet referenced Judge Saltz's August 25, 2020 full opinion on Inovio's lawsuit against VGXI and noted among other things, "[a] recent court decision against INO makes it clear that INO lacks manufacturing capacity to get remotely near the purported goal of 1 mm doses in '20 & 100 mm in '21." One of the sub-Tweets added, "At best, INO either has to wait for final judgment [in the VGXI case] (likely too long) or pay VGXI money INO likely doesn't have." Further leakage of the implications of the VGXI litigation was met with another two-day drop in Inovio's common stock price. By the close of trading on

September 3, 2020, the Company's stock price dropped from a September 1, 2020 closing of $11.41 per share to $9.85, on heavy trading volume.

17. On September 28, 2020, before the market open, Inovio issued a press release disclosing that the FDA "has notified the company it has additional questions about the company's planned Phase 2/3 trial of its COVID-19 vaccine candidate INO-4800" and "[u]ntil the FDA's questions have been satisfactorily addressed, INOVIO's Investigational New Drug Application (IND) for the Phase 2/3 trial is on partial clinical trial." While the press release did not disclose that the FDA had informed Inovio of the partial clinical hold more than three months earlier, on June 26, 2020, the market still reacted swiftly and negatively to the September 28, 2020 disclosure. By the close of trading on September 28, 2020, the Company's stock price had fallen on heavy trading volume from an opening price of $16.94 per share to $12.14 per share. Inovio's stock price has never recovered, and currently trades for less than $4.50 per share.



18. Defendants' scheme to defraud investors is clear. Defendants lied to investors about creating a vaccine within three hours in February and March 2020, and those lies were exposed almost immediately. Defendants lied again to investors between March and May 2020 regarding Inovio's ability to produce certain doses of the INO-4800 vaccine, and then those lies were exposed in a series of partial disclosures over the next few months. Undeterred, Defendants misled investors yet again at the end of June 2020 about the status of the INO-4800 clinical trial, and those lies were exposed in August and September 2020. Defendants' unlawful scheme has caused significant damages to investors and allowed the Company to raise over $320 million in stock offerings. The materiality of Defendants' false and misleading Class Period statements is obvious. As Robert J. Juba remarked in text messages in late January 2020:

> I know I am being a severe PITA but we have a call to talk about the Wuhan project tomorrow morning at 9:30 ET and [Inovio's senior management] will be asking me about [VGXI's] available slots [to manufacture INO-4800].
>
> For the record I have expressed my disagreement with this project and all the circumstances around it as much as I can without actually resigning.
>
> * * *
>
> [J. Joseph Kim] already set up a 1:1 with me tomorrow. I guarantee it's to tell me to stop talking about reality.
>
> * * *
>
> What our management doesn't understand is that we are now under a microscope. If we fail in any way it will be all out there. When we have the time to properly execute a campaign our probability of success is greater than 95%. In this case I give us a coin flip.

## JURISDICTION AND VENUE

19. The claims asserted herein arise under and pursuant to §§10(b) and 20(a) of the Exchange Act (15 U.S.C. §§78j(b) and 78t(a)), and Rule 10b-5 promulgated thereunder by the SEC (17 C.F.R. §240.10b-5).

20. This Court has jurisdiction over the subject matter of this action under 28 U.S.C. §1331 and §27 of the Exchange Act.

21. Venue is proper in this District pursuant to §27 of the Exchange Act and 28 U.S.C. §1391(b) because a significant portion of Defendants' actions, and the subsequent damages, took place within this District.

22. In connection with the acts, conduct, and other wrongs alleged in this complaint, Defendants, directly or indirectly, used the means and instrumentalities of interstate commerce, including, but not limited to, the U.S. mail, interstate telephone communications, and the facilities of national securities exchanges.

## PARTIES

**Plaintiffs**

23. **Manuel S. Williams**: Lead Plaintiff Manuel S. Williams ("Williams"), purchased Inovio common stock during the Class Period on the Nasdaq and was damaged thereby. *See* ECF No. 12-4.

24. **Andrew Zenoff**: Plaintiff Andrew Zenoff ("Zenoff"), purchased Inovio common stock during the Class Period and was damaged thereby. *See* ECF No. 68, Ex. A.

25. Plaintiffs Williams and Zenoff are referred to herein collectively as the "Plaintiffs."

**Defendants**

26. **Inovio**: Defendant Inovio is a Delaware corporation that describes itself as a biotechnology company focused on bringing to market DNA medicines to protect people from infectious disease. Inovio's principal executive offices are located at 660 West Germantown Pike, Suite 110, Plymouth Meeting, Pennsylvania 19462. During the Class Period, the Company's common stock traded on the Nasdaq under the symbol "INO."

27. **J. Joseph Kim**: Defendant J. Joseph Kim ("Kim") served as the Company's Chief Executive Officer ("CEO") and President and as a member of the Board of Directors at all relevant times. Kim previously worked for Merck & Company, Inc. ("Merck") to develop vaccines. Inovio's March 27, 2020 Proxy stressed Kim's scientific background noting he "published more than 100 scientific papers, holds numerous patents, and sits on editorial boards and scientific review panels. He also serves on the board of the International Vaccine Institute and the Council of Korean Americans." During the Class Period, Kim had direct knowledge of the status of the development of INO-4800, as well as the status of the Company's capabilities in producing doses of the INO-4800 vaccine.

28. At all relevant times, Kim was responsible for the content and approval of Inovio's Code of Business Conduct and Ethics (the "Code"). Kim was also required to comply with the Code. The Code required Kim, when reporting the Company's results of operations and other material information to investors, to be "true, accurate, complete, timely, understandable, and not misleading."

29. On July 30, 2020, Kim sold 100,000 shares of Inovio common stock for proceeds of approximately $2,135,000. As reported to the SEC, Kim's July 30, 2020 sale represented 8.0% of his total direct holdings of Inovio common stock. In the 22 months preceding July 30, 2020, Kim did not voluntarily sell any of his direct holdings of Inovio common stock. In May and June 2019, however, Kim's stock broker sold 2.1 million shares of Kim's Inovio common stock, without Kim's instruction, to cover margin calls against a margin loan collateralized by Kim's Inovio common stock. Kim's July 2020 sale of 100,000 shares was purportedly made pursuant to a Rule 10b5-1 trading plan. On information and belief, Kim's trading plan is not a defense to the alleged fraud in this case because he had knowledge of, or recklessly disregarded, non-public, material adverse facts concerning the development status of INO-4800 at the time he created the trading plan.

30. Kim made or had authority over the content and dissemination of the materially false and/or misleading statements and omissions alleged herein at ¶¶97, 99, 102, 104, 107, 109, 111, 113, and is liable for those statements and omissions. Kim is a control person of Inovio within the meaning of §20(a) of the Exchange Act.

31. **Peter D. Kies**: Defendant Peter D. Kies ("Kies") served as the Company's Chief Financial Officer ("CFO") at all relevant times. Kies previously served as the CFO of Newgen Results Corporation. During the Class Period, Kies had direct knowledge of the status of the development of INO-4800, as well as the status of the Company's capabilities in producing doses of the INO-4800 vaccine.

32. At all relevant times, Kies was required to comply with the Code, and had been authorized by Kim and Inovio to speak on behalf of the Company to investors during the Class Period. The Code required Kies, when reporting the Company's results of operations and other material information to investors, to be "true, accurate, complete, timely, understandable, and not misleading."

33. On June 30, 2020, Kies sold 35,000 shares of Inovio common stock for total proceeds of approximately $927,500. As reported to the SEC, Kies' June 30, 2020 sale represented 29.3% of his total holdings of Inovio common stock. On July 15, 2020, Kies sold another 35,000 shares of Inovio's common stock for total proceeds of approximately $873,250. As reported to the SEC, Kies' July 15, 2020 sale represented another 27.4% reduction of his total holdings of Inovio common stock. In the 19 months preceding June 30, 2020, Kies did not sell any of his Inovio stock. Kies' June and July 2020 sales of 70,000 shares were purportedly made pursuant to a Rule 10b5-1 trading plan. On information and belief, Kies' trading plan is not a defense to the alleged fraud in this case because he had knowledge of, or recklessly disregarded, non-public, material adverse facts concerning the development status of INO-4800 at the time he created the trading plan.

34. Kies made or had authority over the content and dissemination of the materially false and/or misleading statements and omissions alleged herein at ¶¶107, 111, and is liable for those statements and omissions. Kies is a control person of Inovio within the meaning of §20(a) of the Exchange Act.

35. **Robert J. Juba, Jr**.: Defendant Robert J. Juba, Jr. ("Juba") served as the Company's Vice President of Biological Manufacturing and Clinical Supply Management at all relevant times. Juba has over 24 years of experience in pharmaceutical and biological vaccine manufacturing for commercial and clinical trial settings. During the Class Period, Juba had direct knowledge of the status of the development of INO-4800, as well as the status of the Company's capabilities to produce doses of the INO-4800 vaccine during 2020 and thereafter. Juba previously worked at Merck as a Network Strategy & Execution Manager responsible for developing strategies for bulk vaccine manufacturing. Juba also held the position of Senior Director of Manufacturing at VGXI, where he was responsible for manufacturing DNA plasmid products.

36. At all relevant times, Juba was required to comply with the Code, and had been authorized by Kim and Inovio to speak on behalf of the Company to investors during the Class Period. The Code required Juba, when reporting the Company's results of operations and other material information to investors, to be "true, accurate, complete, timely, understandable, and not misleading."

37. Juba is a control person of Inovio within the meaning of §20(a) of the Exchange Act.

38. Defendants Kim, Kies, and Juba are referred to herein collectively as the "Individual Defendants."

39. Defendants Inovio, Kim, Kies, and Juba are referred to herein collectively as "Defendants."

## FACTUAL BACKGROUND

### Inovio's Infectious Disease Business

40. Inovio is in the business of designing "DNA medicines." According to Inovio, DNA medicines "are composed of optimized DNA plasmids" that are "synthesized or reorganized by a computer sequencing technology" and delivered "directly into cells intradermally or intramuscularly" using a hand-held device. Along with creating products designed to address cancer and HPV, Inovio uses its "DNA Medicines Platform" to produce what it refers to as "DNA vaccines" to protect against non-HPV infectious diseases. Current infectious disease vaccines in Inovio's product pipeline include those directed at HIV, Ebola, MERS, Zika, Lassa Fever, and COVID-19.

41. Inovio has never brought a single vaccine (or any product) to market in its nearly 40 years of being in business. As reported on the news site *STAT*, "Inovio has tended to issue a lot of press releases touting the potency and promise of its viral vaccine candidates, followed by some form of financing." Yet, "over time, progress stalls out and the vaccine programs go dormant," with "Inovio often blam[ing] outside factors for the lack of success, not its own DNA vaccine technology."

42. A 2009 article from *The Street* similarly illustrates Inovio's pattern of drumming up publicity and then taking advantage of the heightened stock price through fundraising, only to deliver "little if anything of commercial substance":

> The pattern is so familiar it's almost a tradition. A public health scare develops. A tiny drug development firm issues a press release saying it may have a cure. Its stock price explodes.
>
> * * *
>
> As with many publicly traded drug-development firms, whenever Inovio publicizes positive study results, it enjoys a share-price spike, and then sees little if anything of commercial substance arise out of those studies. Over the course of its 10 years as a public company, Inovio . . . has also exhibited a certain fundraising

> rhythm – a habit of issuing fresh shares either to the public or in private placements – that often appears synced to its study-result bulletins and stock-price upticks.

43. Examples of Inovio's pattern are numerous. For instance, on June 11, 2009, the World Health Organization recognized the H1N1 virus as a global pandemic. As reported by *the Street* in an August 7, 2009 article entitled "Inovio Digs for Truffles With Swine-Flu Drug," Inovio "joined a long queue of biotechs that have taken advantage of the high public profile of the swine-flu pandemic." Among other publicity, Inovio announced on July 29, 2009 that its vaccines "demonstrate[d] 100% protection against current pandemic A/H1N1 influenza viruses in animal studies." According to *The Street*, "Inovio shares exploded in value, gaining more than 300%," as investors reacted to the news. The next day, Inovio announced a $30 million registered direct offering. Kim responded to doubters at the time, claiming that "'we're not competing with the GlaxoSmithKlines and the Novartises,'" and that while Inovio would not have "'a product on the shelf this fall,'" "'the power of our approach – we're going to be there when these other traditional approaches fail.'" Over a decade later, Inovio still does not have any approved vaccine.

44. On November 17, 2011, Inovio announced that its "synthetic avian flu vaccine" demonstrated "inhibition of multiple H5N1 strains," followed up with a December 1, 2011 announcement of a $3.5 million underwritten financing.

45. On May 16, 2012, Inovio announced that its "universal avian flu vaccine generate[d] protective antibody responses against six H5N1 viruses in Phase I trial." On June 12, 2012 Inovio announced it was implementing a new ATM, resulting in up to $25 million for Inovio.

46. Throughout 2013, Inovio promoted its purported solutions to deadly pathogens in the run-up to a public offering of Inovio common stock, formally announced in February 2014. Inovio announced on May 14, 2013 that its "DNA vaccine against Ebola and Marburg filoviruses provides complete protection in preclinical challenge study." Inovio reminded investors that Ebola and Marburg were "highly virulent pathogens that have killed up to 90% of the people they infected,"

with "no approved vaccine or therapy available." The Company stressed that it had a vaccine that "stimulate[d] significant antibody and T-cell responses with 100% survival against multiple families of [the] most lethal virus known to man." Similarly, on June 14, 2013, Inovio proclaimed that its vaccine against the H7N9 flu virus "generate[d] [the] first protective antibody responses against . . . H7N9 . . . in 100% of vaccinated animals," "show[ing] how quickly Inovio can respond to a pandemic threat."

47. On July 8, 2013, Inovio announced that its H7N9 vaccine results were "the first time a vaccine shield[ed] animals from sickness and death against the newly emergent H7N9 flu virus." And on November 20, 2013, Inovio announced that its vaccine for "the deadly MERS virus" induced "robust immune response" in pre-clinical testing. Inovio highlighted that "no vaccine exists" for the virus that "has killed 42% of those infected," and it reminded investors to be alarmed about MERS:

> Since 2012, when the virus was first identified, 153 cases from nine Middle Eastern countries have been reported and, alarmingly, 42% of these cases have been fatal. MERS is similar to the SARS virus which infected 8,000 people several years ago. MERS differs from SARS in that it appears to be less contagious, but MERS is almost five times as fatal as SARS, which killed 10% of those infected. There is no vaccine or effective treatment for MERS.

Inovio stated that "[t]he virus ha[d] not been shown to spread in a sustained way in communities" but warned that "the situation is still evolving," with MERS appearing to cause "a severe lung infection" and "rapid kidney failure," with an "extremely high death rate." A few months later, in February 2014, Inovio officially announced its underwritten public offering. The Company obtained net proceeds of approximately $59.2 million as a result.

48. Inovio followed the familiar pattern yet again in 2016-2017, when the Company made a series of announcements celebrating Inovio's purported successes in the fight against Zika virus, followed up with another public offering, this one bringing in $70.2 million in net proceeds to Inovio. For comparison purposes, so far in 2020, Inovio has raised over $320 million from stock offerings while its share price dramatically increased in price.

**The COVID-19 Pandemic**

49. In March 2020, the World Health Organization announced that COVID-19 could "be characterized as a pandemic." Since then, COVID-19, the disease caused by a novel coronavirus named SARS-COV-2, has created a global public health crisis of epic proportions. As of September 2020, COVID-19 had caused over 679,000 recorded death globally, and that number has now grown to more than 5.55 million deaths due to COVID-19, with 852,000 of those deaths in the United States alone. The Virus continues to show little signs of slowing down.

**Potential Market for COVID-19 Vaccine**

50. The Virus had never been identified in human beings before the ongoing global outbreak, and every one of the estimated 7.8 billion people on the planet is potentially at risk of COVID-19. This is true even of those people who have already been infected and have since recovered, as it remains unknown how long previous infection with the Virus prevents further infection in an individual.

**Inovio's COVID-19 Vaccine – INO-4800**

51. Inovio learned about the Virus in December 2019. According to Inovio's website, Chinese researchers shared the genetic sequence of the Virus on January 10, 2020, and Inovio designed its INO-4800 vaccine construct "in three hours after receiving the genetic sequence using its proprietary DNA medicines platform technology." In January and February, Inovio began manufacturing the vaccine and conducting pre-clinical testing.

52. On February 14, 2020, however, Kim was interviewed on Fox Business News. Kim claimed that Inovio had constructed a COVID-19 vaccine in three hours:

> Inovio doesn't need to see or get a hold of the virus to make a vaccine. Rather, we just need the genetic sequence of that so within three hours of accessing that, after the Chinese authorities made it available, we're able to construct our vaccine INO-4800 in about three hours . . . .

**Approval Process for INO-4800**

53. A vaccine can only be used in the United States if approved by the FDA. Various requirements must typically be met for approval, including going through multiple stages of clinical trials. In Phase I, a small number of participants are given the vaccine to test primarily for safety, and sometimes signs of effectiveness are observed. Serious side effects can stop the vaccine approval process at this point. If the vaccine goes on to Phase II, hundreds of volunteers are administered the vaccine to test effectiveness and further test safety. In Phase III, thousands of participants typically receive the vaccine to further test efficacy and safety.

**Relevant Results and Statistics Discussed by Defendants and Market Participants**

54. Defendants and market participants repeatedly focused on the production of antibodies and T cells when discussing the results of studies of INO-4800. The production of antibodies is highly important in determining whether a vaccine can provide protection against a virus. Antibodies are molecules produced by the immune system that bind to a virus, and neutralizing antibodies are those capable of inhibiting or inactivating a virus.

55. T cells also play a role in the immune system, as they work to fight infection by either destroying infected cells (*i.e.*, killer T cells) or by stimulating the production of antibodies by B cells. Researchers have found T cell responses in COVID-19 patients. *See* Alba Grifoni, et al., *Targets of T Cell Responses to SARS-CoV-2 Coronavirus in Humans with COVID-19 Disease and Unexposed Individuals*, 181 Cell 1489 (May 14, 2020). The finding received significant media coverage, including from *Reuters*, *Scientific American*, *Popular Science*, and *U.S. News & World Report*. Reporting on the study on May 18, 2020, *Reuters* stated that "[w]hile the immune system's B cells make antibodies that block the novel coronavirus, its T cells provide another line of attack, according to new research."

**INO-4800 Pre-Clinical and Clinical Studies**

56. On April 6, 2020, Inovio announced that Inovio's INO-4800 vaccine was going to be entering Phase I clinical testing. The title of the Phase I study is "Safety, Tolerability and Immunogenicity of INO-4800 for COVID-19 in Health Volunteers." This Phase I study involved the enrollment of up to 40 healthy adult participants, with each participant receiving two doses of the vaccine. On April 28, 2020, Inovio announced that it had enrolled 40 volunteers, had administered the first dose to each of them, and that it expected to have "interim immune responses and safety results . . . in late June." Inovio also stated that it was conducting additional studies with animals at the same time it was conducting the human clinical trial program.

57. On May 11, 2020, during the Company's first fiscal quarter of 2020 ("1Q20") earnings call, Kate Broderick, Senior Vice President of Research and Development ("Broderick"), stated that Inovio was set to administer the second dose to participants by the end of May and told investors that the Company expected "to have preliminary safety and immunogenicity data by late June."

58. On a June 1, 2020 call, Kim again stated that the Company would be "reporting on Phase 1 data later [in the] month." Similarly, Broderick stated that "just a few short weeks away in June, we will be announcing our clinical trial results." She reiterated later in the call that Inovio hoped to be announcing at least "the interim, early read data from this trial in the June timeframe."

59. On May 20, 2020, Inovio announced pre-clinical results for INO-4800 in an animal study, stating that INO-4800 demonstrated "robust neutralizing antibody and T cell immune responses against coronavirus SARS-CoV-2." According to Inovio, INO-4800 generated "robust" antibody, including of the neutralizing variety, "as well as T cell responses," in mice and guinea pigs. And Inovio again stated that Phase I clinical trial data was "expected in June" from the human trials.

60. On June 30, 2020, the Company issued a press release entitled "INOVIO Announces Positive Interim Phase 1 Data for INO-4800." The press release stated that Inovio was going to "begin U.S. Phase 2/3 efficacy study this summer upon regulatory concurrence." The press release did not include the details of the immunological responses experienced by the study participants, including, but not limited to, the specifics regarding binding and neutralizing antibody and T cell responses, stating, "INOVIO plans to publish [this data] in a peer-reviewed medical journal" at some later time. While emphasizing the purported "positive interim Phase 1 data," the June 30, 2020 press release also failed to disclose that four days earlier Inovio had received a partial clinical hold letter from the FDA. Specifically, the letter provided written notification to Inovio that the INO-4800 Investigation New Drug Application ("IND") "has been placed on clinical hold, and subjects may not be given the investigational drug." According to the FDA, "[t]he preclinical and clinical data [Inovio] ha[s] submitted are insufficient to inform the risk of vaccine-induced enhanced disease for INO-4800 and are therefore insufficient to support initiation of your proposed Phase 3 trial." The FDA also noted that the "low response rates" of clinical participants "are concerning" and the fact that "a lower proportion of subjects with a neutralizing antibody response compared with a binding-antibody response may suggest that some subjects have responded with predominantly non-neutralizing antibodies. This raises concerns about the potential for vaccine-induced enhanced disease."

**The VGXI Litigation**

61. VGXI is a leading contract manufacturer of plasmid DNA utilized in pre-clinical research and human clinical trials. It is currently headquartered in The Woodlands, Texas. VGXI is the primary manufacturer used by Inovio.

62. On June 3, 2020 Inovio filed a complaint against VGXI and its parent company, GeneOne Life Science, Inc., for breach of contract, in the Court of Common Pleas of Montgomery

County, Pennsylvania (the "VGXI Litigation"). Inovio alleged that VGXI could not manufacture one million doses of INO-4800 by the end of 2020, and that Inovio therefore had a contractual right to have VGXI's technology transferred to another manufacturer for use in manufacturing INO-4800. Notably, Inovio sought to file its complaint under seal, but the court denied the motion. According to Inovio's filing, "VGXI has no available capacity in the near term to manufacture any of Inovio's products and cannot manufacture products for commercial sale as it lacks the necessary approvals and facility."

63. In the VGXI Litigation, between June 3, 2020, and July 7, 2020, numerous documents were filed with the court, hearings were held, and testimony was given by individuals from Inovio and VGXI. As alleged in further detail below, these proceedings established numerous key facts, including:

- In April 2019, Juba knew that VGXI did not have large scale manufacturing slots available for over a year.
- Towards the end of 2019, Inovio was made aware that VGXI's manufacturing capacity was very limited in both 2020 and 2021.
- Since at least January 2020, VGXI "repeatedly and clearly notified Inovio that it had no available large-scale manufacturing slots in 2020." Both Kim and Juba had knowledge of these facts in real time. Kim and Juba also admitted that without VGXI transferring its manufacturing technology to other vaccine manufacturers, it would be virtually impossible to deliver one million doses by the end of 2020, and a hundred million doses in 2021.
- On January 13, 2020, Juba was told that VGXI had no large-scale manufacturing availability for the rest of the year, other than two slots that Inovio had already obtained for another product.
- After the January 13, 2020 communication, Juba concluded that VGXI had no more large scale slots, and Inovio immediately began looking for other manufacturers.
- By March 2020, Juba had concluded that reaching a million doses in 2020, or a hundred million doses by the end of 2021, with VGXI was "mathematically impossible."

- On March 23, 2020, Juba was again informed that VGXI had no available large-scale manufacturing in 2020. This was not surprising to Juba, as he already knew that from the January 2020 communication.

- Between late March and early May 2020, VGXI refused to commit to transferring its technology to another manufacturer to allow for production of INO-4800.

- Inovio knew that without a transfer of VGXI's technology, it could take years for another manufacturer to begin producing INO-4800. On May 7, 2020, VGXI sent a letter to Kim informing him that VGXI had terminated its contractual relationship with Inovio.

- As late as June 22, 2020, Inovio did not know if another manufacturer's processes would be capable of producing INO-4800, and Inovio was aware of no evidence supporting the possibility of another manufacturer's process working for the production of a million doses by the end of the year.

- Even if Inovio were to obtain a transfer of VGXI's technology to VGXI's competitors, the transfer process could take years to accomplish.

64. Inovio and VGXI have worked together for years. In 2005, Inovio acquired an equity interest in VGX, International, Inc., which was the parent company of its wholly-owned subsidiary VGXI. Between 2005 and 2008, Inovio manufactured its DNA plasmids itself.

65. On June 25, 2008, Inovio sold its manufacturing operations to VGXI and, in connection with that transaction, entered into an agreement pursuant to which VGXI would produce and supply DNA plasmids for all of Inovio's research and clinical trials (the "Supply Agreement").

66. Pursuant to the Supply Agreement, Inovio agreed to treat VGXI as its most favored supplier for DNA plasmids, and VGXI agreed to treat Inovio as its most favored customer. According to Inovio's SEC filings, the contract provided that before Inovio could manufacture DNA plasmids on its own, or engage with a third party other than VGXI to do so, the Company "must first offer such manufacturing work" to VGXI. The term of the contract was for 10 years, but it continued to be effective after the 10-year term, subject to written notice of termination by either party.

67. The Supply Agreement was critical to Inovio. Under the terms of the Supply Agreement, if VGXI is unable or unwilling to take on a production project from Inovio, VGXI must facilitate the transfer of its manufacturing process "'to a location of Inovio's choosing'" ("Technology Transfer"). As Inovio stated in court documents, without VGXI's know-how, "Inovio cannot manufacture [INO-4800] promptly, safely, or perhaps at all." In fact, Inovio's products "are designed to be manufactured using VGXI's Technology."

68. In testimony in the VGXI Litigation on June 18, 2020, Inovio Chief Operating Officer ("COO") Dr. Jacqueline Shea ("Shea") confirmed the critical nature of a Technology Transfer from VGXI:

> A. [T]he technology transfer enables us to move the product to another facility in the event that VGXI don't have sufficient capacity or otherwise can't manufacture for us.
>
> Q. Does Inovio currently have a substitute for the VGXI technology?
>
> A. We do not.
>
> Q. Is there consequence to Inovio if VGXI does not transfer it?
>
> A. Yes. It will substantially delay the program and will stop us from being able to generate doses.

69. At the same time, Inovio has also known that VGXI does not have the required approvals from the FDA to manufacture DNA plasmids for commercial sale. According to Inovio, this means the Company "must hire other (FDA approved) manufacturers to manufacture doses for public use."

70. As admitted in Inovio's court filing, "VGXI has repeatedly told Inovio, orally and in writing, that it cannot manufacture further batches of Inovio's vaccine at any time in 2020 because it does not have the manufacturing capacity to do so." According to Inovio, VGXI had informed Inovio in April 2019 that VGXI's "large-scale manufacturing slots were booked for the next year." Juba, testifying in front of the Court of Common Pleas of Montgomery County, Pennsylvania on

June 18, 2020, confirmed: "We had heard as early as April 2019 that large scale slots were in short supply." Indeed, he confirmed that he personally knew from an email he received on April 24, 2019, that VGXI did not have slots for large scale manufacturing until well into 2020:

> Q. So you knew in April of 2019, they didn't have large scale slots for over a year?
>
> A. That's correct.

71. As admitted in Inovio's complaint, "[s]ince at least January 2020, VGXI repeatedly and clearly notified Inovio that it had no available large-scale manufacturing slots in 2020." According to Inovio, on January 13, 2020, Juba asked VGXI's COO, Dorothy Peterson ("Peterson"), "whether VGXI had any open large-scale manufacturing slots for the Vaccine," and Peterson informed Juba that there were only the two large-scale slots Inovio had previously obtained for another product.

72. Juba confirmed in his testimony that he had received a text message from Dorothy Peterson in January 2020 "saying there was no available large scale slots for the rest of the year." He also confirmed that he emailed Peterson and Christy Franco of VGXI on March 23 regarding possibly using a bulk slot for COVID-19 and that in the email exchange, Peterson wrote the following: "As we have discussed, our schedule for large scale is currently full for the remainder of 2020." Juba provided the following testimony about this statement:

> Q. And what did you understand that to mean?
>
> A. That was consistent with the text message that I got in January saying there was no available large scale slots for the rest of the year.
>
> Q. Did that statement surprise you?
>
> A. No.

Juba admitted: "I just know it was very consistent with what I had heard in previous discussions."

73. Inovio COO Dr. Shea confirmed in testimony that Juba, her direct report, had "direct conversations" with VGXI about whether VGXI could manufacture INO-4800 in the quantities Inovio wanted, in Inovio's timeframe. VGXI "made it very clear they were unable to do that." According to Shea, "We requested additional capacity multiple times, and they told us none was available." Shea testified that VGXI first started telling Inovio about the lack of capacity "towards the end of 2019 when we were looking to book spots for other products." According to Shea, "they informed us then that they had very limited slot availability in 2020 and 2021."

74. According to Juba's testimony, by March 2020, he had reached the conclusion that VGXI "would be unable to manufacture a million doses" by the end of 2020. He came to that conclusion for "two reasons": (i) "the lack of capacity," *i.e.*, "[t]hey simply did not have enough manufacturing slots," and (ii) "the cost of each dose at that smaller scale." Juba had concluded by March 2020 that reaching a hundred million doses with VGXI by the end of 2021 was "mathematically impossible," as was reaching a million doses in 2020:

> Q. By March 2020, did you reach any conclusions about VGXI's ability to manufacture a hundred million doses by the end of 2021?
>
> A. Mathematically impossible.
>
> Q. Was the one million doses in 2020 mathematically impossible, too?
>
> A. That is correct.

75. As admitted in Inovio's complaint, the Company "gave up the two large-scale manufacturing slots it had reserved" for other products "and substituted the Vaccine in their place." This switch only happened after Inovio had "extensive negotiations," requiring approval from the National Institutes of Health. Even with these efforts, however, Inovio only obtained 55,000 doses through VGXI – far short of a million doses. And Juba testified that because of the process of filling the vials, the actual number of doses is "significantly less than the 55,000 that were produced on the bulk scale."

76. Knowing that VGXI would be unable to produce INO-4800 on a large scale, Inovio engaged with other manufacturers. One of those manufacturers was Ology. According to a VGXI court filing in the Court of Common Pleas of Montgomery County, Pennsylvania, Inovio began discussions with Ology "regarding a partnership to apply for a government grant to manufacture Inovio's COVID-19 vaccine candidate." These discussions were "unbeknownst to VGXI," and began taking place in or around January 2020.

77. Juba confirmed in testimony that he first contacted Ology in late January 2020, and at that time, he had already concluded that VGXI did not have more large scale slots available:

> Q. After you concluded that VGXI had no more large scale slots, what did the company do in response?
>
> A. We started immediately looking for other manufacturers to work with – again, the goal was to make as many doses as we could as quickly as we could.
>
> Q. And was Ology one of those companies?
>
> A. Yes.
>
> Q. When did you reach out to Ology?
>
> A. My first contact with Ology was in January, late January 2020.
>
> Q. So was that before or after you received that January 13th text from Mrs. Peterson about there being no more spots?
>
> A. After. After the text.

78. In March 2020, Inovio and its new partner Ology had jointly applied for a grant from the DoD.

79. According to a VGXI court filing, Juba contacted VGXI's Dorothy Peterson on March 23, 2020, to give her a "'heads up'" that the next day, Inovio would be announcing a partnership between Ology and the DoD to manufacture INO-4800. According to Peterson's testimony, on March 23, 2020, Juba falsely told her that Ology would be using Ology's own technology to manufacture INO-4800.

80. On March 24, 2020, Inovio announced the partnership with Ology to manufacture INO-4800, funded by an $11.9 million grant from the DoD.

81. According to a court filing by VGXI, "[f]ollowing the press release, and possibly even before," Juba secretly initiated a transfer of VGXI technology to Ology, including "VGXI's confidential DNA plasmid manufacturing and purification processes and methods." "VGXI had no idea this was occurring." Notably, Juba previously worked at VGXI as its Senior Director of Manufacturing. According to Inovio's court filing, "[b]etween late March and early May 2020, Inovio repeatedly asked VGXI" about transferring its technology, but VGXI "refused to commit to providing" its technology to Ology.

82. In addition to seeking help from Ology, Inovio also turned to Richter-Helm BioLogics GmbH Co. KG ("Richter-Helm"). Juba testified that by February 6, Inovio was working with Richter-Helm to acquire manufacturing slots for the plasmids used for INO-4800, "as part of the overall Coronavirus response." Inovio and Richter-Helm announced on April 30, 2020 that Richter-Helm would manufacture INO-4800.

83. Richter-Helm had previous knowledge of VGXI's technology through an earlier technology transfer. However, as Inovio recognized in its court filing, Richter-Helm lacks "the capacity or availability to manufacture the volume of DNA plasmids Inovio needs to develop, test, and potentially produce one million doses in 2020, over 100 million doses in 2021, and hundreds of millions of doses thereafter." Shea confirmed this in her testimony:

Q. Can Richter-Helm manufacture all the doses you need?

A. No.

Q. Why not?

A. It doesn't have sufficient capacities.

Q. Does Richter-Helm dispute that fact?

A. No.

84. Inovio has also looked into having INO-4800 manufactured by companies other than Richter-Helm or Ology, but as of June 18, 2020, Inovio had only contracted with Richter-Helm. Other manufacturers that Inovio has been considering include the Serem Institute, in India, and several manufacturers in China.

85. Inovio admitted in its court filing that because VGXI refuses to transfer its technology to Ology and other manufacturers, such manufacturers "must set up the manufacturing process from scratch, a process which can take months, or even years, with a DNA vaccine." Testimony from Shea confirms the dire situation for Inovio:

> Q. Will another manufacturer have to develop a new process if VGXI does not transfer the technology?
>
> A. They will either have to develop a new process or we will have to see if their existing process works for this vaccine.
>
> Q. Do you have any ability to quantify the amount of delay that will take place if VGXI does not transfer the technology?
>
> A. Months to years.
>
> * * *
>
> Q. Does this failure to transfer the technology impact your ability to stay on a parallel track system of testing and manufacturing at the same time?
>
> A. Yes.

86. Inovio points out that this "time consuming and regulated process . . . would substantially delay the successful manufacture and distribution of Inovio's products." For example, as Inovio admits in its court filing, "[i]t was not (and is not) known if Ology's process" of manufacturing INO-4800 "will be successful" at meeting the "strict standard" of being "'analytically comparable'" to the vaccine manufactured using VGXI's process. According to Shea's testimony, "Ology is currently conducting feasibility studies with its own process, but it has never used its

process of this scale before. So it is uncertain whether or not this process will be suitable for manufacturing to the scale or to deliver the yield that it will require."

87. In her testimony, Shea also explained that without a Technology Transfer from VGXI, third-party manufacturers would "have to go through detailed comparability studies" to show that their processes manufactured a vaccine that "was the same as the vaccine manufactured using the VGXI process." According to Shea:

> So in vaccine manufacturing, there is this adage, the process is the product. So to enable to make any major changes to your manufacturing process, you need approval by the regulators, and that requires a substantial data package and has some risk associated with it.
>
> The quickest least risky way to manufacture large volumes of our candidate COVID-19 vaccine is to use the VGXI process, which is the process that all of Inovio's DNA medicines by [sic] manufactured with. I am not saying it's impossible to use other processes, but it would be very difficult, time consuming and expensive.

88. Shea admitted that by June 18, 2020, Inovio still had "not evaluated [its] plasmid" in the processes of other third-party manufacturers. According to Shea:

> [W]e have no idea what the yield will be or what the time required or costs required will be to be able to get their processes to yield the same amount of plasmid as our existing process.

89. Inovio's counsel, in June 22, 2020 proceedings in the VGXI Litigation, similarly highlighted the Company's dependency on VGXI's technology:

> It's unknown if another manufacturer can replicate or find a work-around. . . . No one knows how long it will take. . . . Lack of a technology transfer will delay manufacture of the vaccine.
>
> . . . [W]e are trying hard to find another manufacturer who can develop its own process to do this. . . . It might take two months, three months, eight months, years. . . . As a result, there is a delay.
>
> If we don't get their technology, all I could tell you is personally I hope they find somebody who can get those million doses by the end of the year. But it does not seem possible. There is no evidence that that's possible.

90. In testimony in front of the Court of Common Pleas of Montgomery County, Pennsylvania on June 22, 2020, Kim admitted that Inovio's ability to deliver one million doses of INO-4800 in 2020 has always been dependent on Inovio obtaining a Technology Transfer from VGXI:

> Q. Has your company repeatedly issued press releases saying it is on track to deliver one million doses of the COVID vaccine by year-end with existing resources and capacity?
>
> A. Yes, because we believe that we have rights to the tech transfer provision in the supply agreement.
>
> * * *
>
> Q. If you do not get a VGXI technology transfer, which includes VGXI's IP, can your company manufacture one million doses of the COVID vaccine by year-end this year?
>
> A. It would be difficult.
>
> Q. So these statements in press releases about existing resources and capacity being on track for a million doses, you are always talking about assuming you got the VGXI technology?
>
> A. Yes.
>
> Q. Okay. Has your company been telling investors that despite what happens in this lawsuit, you are still on track for a million doses this year and hundreds of millions more in the near future?
>
> A. We believe we will have – we have and we will have access to this tech transfer.
>
> Q. It's always depending upon the tech transfer from VGXI?
>
> A. Yes.

91. Even if VGXI were to approve a Technology Transfer, this would not solve Inovio's manufacturing woes. According to testimony from VGXI's CEO Young Park, a Technology Transfer by VGXI to another company "may take over two years," and "to teach another company to duplicate . . . would take over two years."

92. According to Juba, a previous transfer of technology from VGXI to Richter-Helm, which was initiated in 2014, took "about seven months" from the signing of the contract, and in that instance, VGXI may have already been getting Richter-Helm up to speed before the signing of the contract:

> A. We signed our agreement with Richter-Helm to initiate the tech transfer in November of 2014, and we were ready to begin GMP manufacturing in June of 2015. So it was about seven months from the time we signed the agreement with them until the time we started our GMP fermentations.
>
> Q. Do you know if VGXI's work with Richter-Helm started earlier than your contract with them?
>
> A. Possible, yes.

93. On May 7, 2020, VGXI terminated the Supply Agreement with Inovio and informed Inovio that VGXI would not be transferring its manufacturing technology to Ology, as Inovio had requested. In a letter to Kim, Peterson stated:

> This letter hereby serves as written notice that the Supply Agreement has expired . . . and VGXI will not extend the agreement beyond the Initial Term. In addition, Inovio breached the Supply Agreement. Thus, the Supply Agreement is hereby terminated.

94. In the May 7, 2020 letter, Peterson stated that she had received "repeated requests from Rob Juba . . . concerning providing technology transfer information to Ology Bioservices." But she told Kim that "Inovio does not have a right to request such transfer."

95. In mid- to late May 2020, Kim had several conversations with VGXI's CEO, Young Park. According to a court filing by VGXI, Kim asked if VGXI would allow for Inovio to license VGXI's intellectual property to other manufacturers. VGXI refused but "offered to manufacture all the doses of the vaccine candidate that Inovio supposedly needed." However, Inovio would have to put the customary 50% down on the "multi-billion dollar order." According to VGXI's court filing, "Inovio balked and refused to pay." Instead, Kim ended the meeting after stating: "'We don't have that kind of money.'"

96. On June 3, 2020 Inovio filed its complaint against VGXI. On June 25, 2020, the court in the VGXI Litigation denied Inovio's prayer to order VGXI to hand over its intellectual property and technology. The next day, Inovio provided notice that it would appeal the trial court's ruling. In July 2020, VGXI filed counterclaims against Inovio for breach of contract, unfair competition, misappropriation of trade secrets, and unjust enrichment. VGXI also sued Ology, asking the court, *inter alia*, to enjoin Inovio from transferring VGXI's technology.

**DEFENDANTS' MISLEADING STATEMENTS AND MATERIAL OMISSIONS**

97. On February 14, 2020, beginning at 3:03 p.m. EST, Kim appeared on Fox Business News and participated in a live interview entitled "Coronavirus Vaccine Created in 3 Hours: Inovio Pharmaceuticals CEO." Fox's Neal Cavuto ("Cavuto") conducted the interview of Kim regarding Inovio's purported development of a vaccine for COVID-19. The interview of Kim is set out in full below:

> [CAVUTO:] Scientists at Inovio Pharmaceuticals claim to have discovered a coronavirus vaccine three hours after getting access to the virus's genetic sequence. Inovio Pharmaceuticals CEO Dr. Joseph Kim on all of that, Doctor thank you for taking the time.
>
> [KIM:] Thank you Neil.
>
> [CAVUTO:] Tell us about this.
>
> [KIM:] Well, using our DNA medicine's platform, Inovio doesn't need to see or get ahold of the virus to make a vaccine. Rather we just need the genetic sequence of that, ***so within three hours of accessing that after the Chinese authorities made it available we were able to construct our vaccine INO-4800 in about three hours***.
>
> [CAVUTO:] So when you say it's a vaccine, ah, people who have the virus take this and they don't have it anymore, is that right?
>
> [KIM:] Well no, this is a preventive vaccine, so we would be developing this to curb the infection and the outbreak.
>
> [CAVUTO:] Alright, so I understand, for those that have it now what happens to, obviously to take a vaccine, what's in store for them?

[KIM:] Well there may be ways to use the vaccines to curb and maybe even help those who are infected, but certainly vaccines have in history have shown to be very important in combating these type of outbreaks.

[CAVUTO:] Okay, so let me understand this. Now you partnered with Beijing Advaccine, and I guess it's a Chinese concern much like your own to address this. Are the Chinese authorities now saying we are going to get this out to the population, that's better than a billion folks, what are they saying?

[KIM:] Well, you know, the first step in, once we constructed our vaccine, we started the pre-clinical testing here in the U.S. right away. We are preparing for our clinical trials to start in the U.S. early this summer. At the same time, because the infection in China is most ferocious, we decided to go into China for human testing as soon as possible in parallel. So we're collaborating with a vaccine and others so we're building a coalition of funders, collaborators and partners to attack this both here in the U.S. and abroad.

[CAVUTO:] You know what I don't understand doctor, you're the expert, clearly I am not, why even your company isn't getting a more impressive worldwide reaction. This is a very big deal if so, and I'm just wondering why no one knows about it.

[KIM:] Well, I think people are beginning to realize how serious this outbreak is. Certainly the speed of spread –

[CAVUTO:] But you're the only one that I know of, Doctor, that has a vaccine and yet the stock is up appreciably – about six and three quarters percent – that's nothing to dismiss, but I would imagine some of this, the world [unintelligible] is waiting for something like this and all the indications are you've got it.

[KIM:] Well, we have it and we've proven that we can do this for other infections like MERS and ZIKA in the past. In fact, same organization that's funding our U.S. trial, CEPI, has funded us with $56 million in the past to develop a vaccine for MERS infection which is another coronavirus, family virus, as well as Lassa fever. So I think people are beginning to pay attention and we do have a modern day, 21st century technology to best respond to this type of emerging infectious challenges.

[CAVUTO:] All right, we're going to watch this closely, Doctor. It means a great deal to us that you chose to come on Fox Business to share this news. That is very big news indeed, and if true, would be a great relief, pretty much to the world. So we'll follow it closely, Doctor. Thank you again.

[KIM:] Thank you Neil.

98. In reaction to this news, Inovio's common stock price closed up 7.5% on February 14, 2020, compared to the prior day's closing price of $3.86 per share. But for the dilutive effect of a

$100 million share ATM offering of Inovio common stock, which became effective on the evening of February 13, 2020, the Company's stock price would have traded at a higher price prior to Kim making his statements to Fox Business News.

99. On March 2, 2020, at 3:20 p.m. EST, Kim attended a televised meeting in the White House Cabinet Room with President Trump, members of the Coronavirus Task Force and other pharmaceutical company executives to discuss how the federal government could accelerate the development of vaccines and therapeutic treatments for COVID-19. Later during the meeting, in response to questioning by President Trump, Kim again stated, "***[b]y getting just the DNA sequence of the virus, we were able to fully construct our vaccine within three hours***." At the end of Kim's remarks with President Trump, Kim added, "[w]ith existing resources and capacity, by end of this year, Inovio could deliver about one million doses . . . by end of this year – but to scale beyond that, we need your help, Mr. President."

100. In response to Kim's statements at the White House meeting, on March 3, 2020, Inovio's common stock price closed up 69.7%, on over 121 million shares in trading volume, compared to $4.39 per share at the close of March 2, 2020. Inovio's common stock price continued to skyrocket through March 6, 2020, closing at $14.09 per share as investors continued to acquire the Company's shares. Between March 4 and March 6, 2020, over 450 million shares changed hands.

101. Defendants' February 8 and March 2, 2020 statements regarding the construction of a COVID-19 vaccine within three hours were materially false and misleading when made. On March 3, 2020 *via* Inovio's Twitter feed, the Company corrected Kim's February 8 and March 2, 2020 statements, admitting that the Company had not constructed its vaccine within three hours, but had actually "designed" a vaccine construct within three hours after receipt of the COVID-19 viral sequence from China. A vaccine construct (or vaccine prototype) is an actual vaccine, not a mere design of one.

102. On March 24, 2020, during the trading day, Inovio issued a press release entitled "Ology Bioservices, Inovio Partner to Manufacture COVID-19 DNA Vaccine with $11.9 Million Department of Defense Grant." The press release noted that "***the [DoD] has awarded Ology Bioservices with a contract valued at $11.9 million to work with Inovio on DNA technology transfer to rapidly manufacture DNA vaccines***." Kim added, "'***[t]his partnership increases Inovio's manufacturing capabilities for our COVID vaccine and establishes an additional DNA vaccine manufacturing facility to protect the U.S. military against current and future disease outbreaks***.'"

103. The Company's and Kim's statements in March 24, 2020 press release were materially false and misleading when made. At the time these statements were made, Inovio had not acquired VGXI's permission under the Supply Agreement to transfer VGXI's intellectual property and vaccine manufacturing processes to Ology. On March 23, 2020, Juba contacted Dorothy Peterson, VGXI's COO, to give VGXI advanced warning of the March 24, 2020 press release. Juba did not inform Ms. Peterson that Inovio would need to transfer VGXI's intellectual property or technology to Ology and, in fact, lied to Ms. Peterson and stated that Ology would be using Ology's own vaccine manufacturing technology. As part of the DoD's $11.9 million grant to Inovio, however, the Company intended to transfer VGXI's technology to Ology (and unlawfully transferred part of it and, according to VGXI, falsely represented to the DoD that Inovio owned VGXI's technology and intellectual property). Ology, prior to March 2020 and up to today, still does not have the capability to deliver any INO-4800 doses.

104. On May 11, 2020, immediately after the market close, Inovio conducted its 1Q20 earnings conference call with analysts and investors. Kim participated in the conference call. During the call, Kim and RBC Capital Markets analyst Gregory J. Renza engaged in the following discussion:

> [RENZA:] That's very helpful. And just one more quick one, if I may. I know you've already provided some color on device strategy and progress. I'm just curious if as you talk about 1 million doses by the end of the year to have the capacity for. How that translates into devices and what progress we should be looking for there, maybe more specifically what the dose-to-device ratio operational can be expected to be?
>
> [KIM:] Yes. Thanks, Greg. ***Well, just roughly, when we say we're preparing 1 million doses, we're discussing or we're stating both the plasmids and the device and arrays to deliver them. So you can't really have one without the other. So we're on right track to do that***. But we're preparing to do beyond that, we're preparing and increasing our scale to be able to provide hundreds of millions of doses starting next year. So these are the preparations that take to – which we're already doing to scale up in that massive scale. ***Assuming success of INO-4800, we will be in a great position to do so by relying on our current contract manufacturers of plasmids and adding on additional manufacturers that can help us scale***.

105. In response to Defendants' conference call statements, Inovio's common stock price closed up 8.4% on May 12, 2020, on over 55 million shares in trading volume, compared to $11.90 per share at the close of May 11, 2020.

106. Defendants' May 11, 2020 statements regarding being "right on track" to produce one million doses of Inovio's COVID-19 vaccine by the end of the year and using "current contract manufacturers," including VGXI, to deliver hundreds of millions of doses beyond 2020, were false and misleading when made because Defendants failed to disclose the following material facts:

(a) In late 2019, Inovio was made aware that VGXI had very limited availability in both 2020 and 2021;

(b) On January 13, 2020, Juba was told that VGXI had no large-scale manufacturing availability for 2020, except for two slots reserved for a different Inovio product;

(c) Between January and March 2020, VGXI had repeatedly informed Inovio that it had no available large-scale manufacturing slots available for the rest of the year, and thus Inovio knew VGXI would be unable to satisfy Inovio's goal of producing one million doses by the end of 2020 (let alone hundreds of millions of doses thereafter);

(d) By March 2020, the Company had concluded that reaching a million doses in 2020, or a hundred million doses by the end of 2021, with VGXI was "mathematically impossible";

(e) On March 23, 2020, Juba was again informed that VGXI had no available large-scale manufacturing in 2020;

(f) VGXI did not have the necessary approvals from the FDA to produce DNA plasmids for vaccines for public use;

(g) Successful transfer and use of VGXI's vaccine manufacturing, intellectual property, and technology by VGXI's competition could take years to accomplish;

(h) Inovio engaged Ology beginning in January 2020 for the purpose of delivering sufficient doses in 2020 and 2021. Between late March 2020 and early May 2020, Inovio repeatedly requested that VGXI transfer its DNA manufacturing technology to Ology, but VGXI refused to make the transfer, thereby preventing Ology from producing Inovio's vaccine;

(i) In April 2020, Inovio engaged Richter-Helm. While Richter-Helm has knowledge of VGXI's DNA vaccine manufacturing processes, Richter-Helm informed Inovio that it would be unable to deliver one million doses by the end of 2020, let alone over 100 million doses in 2021;

(j) On May 7, 2020, VGXI informed Kim that VGXI had cancelled its vaccine supply contract with Inovio. Specifically, on May 7, 2020, VGXI informed Kim that "[t]his letter hereby serves as written notice that the Supply Agreement has expired . . . and VGXI will not extend the agreement beyond the Initial Term. In addition, Inovio breached the Supply Agreement [by unlawfully transferring VGXI's intellectual property to Ology]. Thus, the Supply Agreement is hereby terminated.";

(k) On May 7, 2020, with respect to Inovio's repeated requests to transfer the vaccine manufacturing technology to Ology, VGXI further informed Kim that VGXI had repeatedly refused the transfer request because "Inovio does not have a right to request such transfer.";

(l) Inovio's ability to be on track to produce one million doses by the end of 2020 has always been dependent on getting a technology transfer from VGXI; and

(m) Because VGXI refused to transfer its intellectual property to Ology, and Richter-Helm does not have the capacity to deliver the needed doses in 2020 and beyond, the Company's new manufacturing partners would need to set up vaccine manufacturing processes from scratch – which, according to Inovio, could take "years."

107. On May 12, 2020, Inovio issued a Prospectus on Form 424B5 ("Prospectus") for an ATM offering of $100 million in common stock. The Prospectus was issued pursuant to Inovio's March 13, 2020 Registration Statement on Form S-3 ("Registration Statement"). Kim and Kies signed the Registration Statement and caused the Company to file the May 12, 2020 Prospectus with the SEC. The Prospectus incorporated by reference the Company's 2019 Form 10-K. Kim and Kies signed the 2019 Form 10-K (filed with the SEC on March 12, 2020). The 2019 Form 10-K and, therefore, the Prospectus contained the following risk disclosure:

> ***If we lose or are unable to secure collaborators or partners, or if our collaborators or partners do not apply adequate resources to their relationships with us, our product development and potential for profitability will suffer***.
>
> We have entered into, and may continue to enter into, distribution, co-promotion, partnership, sponsored research and other arrangements for development, manufacturing, sales, marketing and other commercialization activities relating to our products. . . .
>
> ***If any of our current or future collaborators*** breaches or ***terminates our agreements***, or fails to conduct our collaborative activities in a timely manner, ***our commercialization of products could be diminished or blocked completely***.

108. This risk disclosure language, incorporated by reference into the May 12, 2020 Prospectus, was materially misleading when made for the same reasons stated in ¶106. The May 12,

2020 Prospectus was materially misleading for an additional reason: It failed to disclose the May 7, 2020 termination of VGXI contract, and that Ology and Richter-Helm did not have the capability of delivering one million doses by the end of 2020, or hundreds of millions of doses per year thereafter. Those facts should have raised a reasonable expectation with Kim and Kies that the VGXI contract cancellation, as well as Ology and Richter-Helm's manufacturing limitations, would have a materially unfavorable impact on the Company's future net sales, revenues and/or income from continuing operations.

109. On June 30, 2020, before the markets opened, Inovio issued a press release entitled "INOVIO Announces Positive Interim Phase 1 Data for INO-4800 Vaccine for COVID-19." The press release included statements stating "INOVIO to begin U.S. Phase 2/3 efficacy study this summer upon regulatory concurrence" and "INOVIO has expanded its Phase 1 trial to add older participants in additional cohorts and plans to initiate a Phase 2/3 efficacy trial this summer upon regulatory concurrence." Kim was also quoted about the INO-4800 clinical trial, stating: "We are very encouraged by the positive interim safety and preliminary cellular and humoral immune response results to date . . . ."

110. The Company's and Kim's statements in the June 30, 2020 press release were materially false and misleading when made. As of June 23, 2020, and at the time these statements were made, Defendants knew, but failed to disclose, that Inovio had already been informed by the FDA that the trial for INO-4800 had been placed on partial clinical hold. Inovio was informed by a June 23, 2020 telephone call that the FDA was placing the INO-4800 trial on partial clinical hold and again in a June 26, 2020 letter that stated that IND "has been placed on clinical hold, and subjects may not be given the investigational drug." The June 26, 2020 FDA letter specifically identified, among other deficiencies, that "[t]he preclinical and clinical data [Inovio] ha[s] submitted are insufficient to inform the risk of vaccine-induced enhanced disease for INO-4800 and are

therefore insufficient to support initiation of your proposed Phase 3 trial." The FDA also noted that the "low response rates" of participants in the Phase I trial "are concerning" and the fact that "a lower proportion of subjects with a neutralizing antibody response compared with a binding-antibody response may suggest that some subjects have responded with predominantly non-neutralizing antibodies. This raises concerns about the potential for vaccine-induced enhanced disease."

111. On June 30, 2020, Kies sold 35,000 shares of Inovio common stock for total proceeds of approximately $927,500. Two weeks later, on July 15, 2020, Kies sold another 35,000 shares of Inovio's common stock for total proceeds of approximately $873,250. Two weeks after that, Kim sold 100,000 shares of Inovio common stock for proceeds of approximately $2,135,000.

112. Defendants Kies' and Kim's stock sales triggered their duty to disclose the fact that, at the time of their sales, Defendants knew that Inovio had already been informed by the FDA that the trial for INO-4800 had been placed on partial clinical hold. Inovio was informed by a June 23, 2020 telephone call that the FDA was placing the INO-4800 trial on partial clinical hold and again in a June 26, 2020 letter that stated that IND "has been placed on clinical hold, and subjects may not be given the investigational drug." The June 26, 2020 FDA letter specifically identified, among other deficiencies, that "[t]he preclinical and clinical data [Inovio] ha[s] submitted are insufficient to inform the risk of vaccine-induced enhanced disease for INO-4800 and are therefore insufficient to support initiation of your proposed Phase 3 trial." The FDA also noted that the "low response rates" of participants in the Phase I trial "are concerning" and the fact that "a lower proportion of subjects with a neutralizing antibody response compared with a binding-antibody response may suggest that some subjects have responded with predominantly non-neutralizing antibodies. This raises concerns about the potential for vaccine-induced enhanced disease."

113. On August 10, 2020, Defendants issued a press release entitled "INOVIO Reports Second Quarter 2020 Financial Results; Provides DNA Medicines Clinical Program Mid-Year Update." In the press release, Kim is quoted stating that the Company was "'starting our Phase 2/3 COVID-19 clinical study in the U.S. in September.'" Following the press release on August 10, 2020, Inovio hosted a conference call with investors and analysts. During the conference call, the first question submitted to Defendants was about the commencement of the Phase II/III trial: "I'm just curious if you could perhaps comment on the current gating factors for getting that going. It sounds like you're targeting a September start, maybe just slightly a delay from maybe previous commentary. So I just want to understand maybe what the pushes and pulls are there." In response Kim stated:

> Yes. Thank you, Greg. So we've been working urgently to get our Phase II/III events. We are in very active discussions with the FDA on the design, and we feel that we are very close to this process. So in terms of drug doses, we have everything available to execute. In terms of the devices, we have everything – we have very encouraging and positive Phase I data, which is undergoing peer review. So we feel like we are executing on this. Obviously, we are concurrently working on getting an external funding to support this large trial. So please stay tuned because we will be able to, certainly by September, announce the Phase II/III start with external funding in this regard.

Later during the call, another analyst followed up with Kim: "And then just lastly – and I guess it was kind of asked at the outset, but I guess you characterized the initiation of the II/III as kind of being dependent upon receiving FDA concurrence. I guess can you maybe just talk a little bit about what that FDA concurrence looks like?" In response, Kim stated:

> Yes. So FDA concurrence just means it's an actual term for FDA approval of any process in process steps. Nothing is actually approved. IND isn't approved. It's concurred or you're allowed to go forward. So it's just a terminology. So we could have easily have used colloquial language of, yes, upon getting FDA okay to move to the next steps.

114. The Company and Kim's statements on August 10, 2020 were materially false and misleading when made. As of June 23, 2020, and at the time these statements were made,

Defendants knew, but failed to disclose, that Inovio had already been informed by the FDA that the trial for INO-4800 had been placed on partial clinical hold. Inovio was informed by a June 23, 2020 telephone call that the FDA was placing the INO-4800 trial on partial clinical hold and again in a June 26, 2020 letter that stated that IND "has been placed on partial clinical hold, and subjects may not be given the investigational drug." The June 26, 2020 FDA letter specifically identified, among other deficiencies, that IND "[t]he preclinical and clinical data [Inovio] ha[s] submitted are insufficient to inform the risk of vaccine-induced enhanced disease for INO-4800 and are therefore insufficient to support initiation of your proposed Phase 3 trial." The FDA also noted that the "low response rates" of participants in the Phase 1 trial "are concerning" and the fact that "a lower proportion of subjects with a neutralizing antibody response compared with a binding-antibody response may suggest that some subjects have responded with predominantly non-neutralizing antibodies. This raises concerns about the potential for vaccine-induced enhanced disease."

**DISCLOSURE OF DEFENDANTS' SCHEME TO DEFRAUD**

115. On March 9, 2020, at or about 10:38 a.m. ET, Citron Research issued a Tweet condemning Kim's claims that the Company had constructed a vaccine within three hours, noting Kim's assertions were "ludicrous and dangerous" and that "[i]nvestors have been warned." At or about 1:26 p.m. ET on the morning of March 9, 2020, Inovio responded to Citron Research with a Tweet of its own, conceding that it had not constructed its vaccine within three hours, but had merely "designed a vaccine construct." In response to this exchange, the Company's stock price dropped from its March 9, 2020 opening price of $18.72 per share to close at $9.83, on over 138 million shares in volume.

116. On March 10, 2020, as investors continued to absorb Inovio's concession that Kim's prior statements were not accurate, the Company's stock price dropped from its March 9, 2020 closing price of $9.83 per share to close at $5.70 per share, on over 75 million shares in volume.

The March 9-10 share price drop reflected a market capitalization loss of over $600 million, or a 59.5% decline from Inovio's closing price on March 6, 2020.

117. On March 13, 2020, *STAT* published an article entitled, "How one company made $208 million on an untested coronavirus vaccine." The article mentioned that by March 11, 2020, Inovio had sold more than 43 million shares in an ATM offering. The article noted companies generally are wary of relying on ATM offerings due to dilution, "but Inovio's stock [had] more than tripled since the start of the year thanks to the coronavirus outbreak and a flurry of press releases touting its work on a vaccine." *STAT* warned investors that:

> Inovio has tended to issue a lot of press releases touting the potency and promise of its viral vaccine candidates, followed by some form of financing. But over time, progress stalls out and the vaccine programs go dormant.
>
> * * *
>
> The company's four-decade track record of drug-development futility and an accumulated deficit of $740 million suggest the task may be too much for it to handle.

118. On June 3, 2020, Inovio filed its complaint against VGXI, asserting that VGXI was preventing Inovio from producing one million doses of INO-4800 by the end of year for purposes of continuing clinical testing of the vaccine. In that lawsuit, Inovio contended that unless VGXI transferred its intellectual property and technology for producing INO-4800 to other manufacturers, it would be mathematically impossible to deliver one million doses by the end of 2020 (let alone, hundreds of millions of doses in 2021 and beyond).

119. In response to news that Inovio had filed its lawsuit against VGXI, the Company's stock price experienced a two-day drop, from a closing price of $14.34 per share on June 2, 2020 to a closing price of $11.88 per share on June 4, 2020, on two-day trading volume of over 53 million shares. The June 3-4 share price drop reflected a market capitalization loss of over $350 million, or a 17.2% decline from Inovio's closing price on June 2, 2020.

120. On June 5, 2020, *Fierce Pharma* published an article entitled "Inovio accuses manufacturing partner of hampering COVID-19 vaccine scale-up in lawsuit." The article stated "Inovio has had a rough week after the U.S. government left the biotech off its list of candidates most likely to produce a viable COVID-19 shot [and now] . . . the company has taken its frustration out on a longtime manufacturing partner it accused of withholding technical knowledge and killing a scaled-up shot rollout."

121. On the evening of August 10, 2020, Inovio held its second fiscal quarter of 2020 earnings conference call. During the call, Kim refused to answer questions about the VGXI case or reaffirm the assurances made in the "standby statement[s]." As opposed to his prior claims that Inovio remained "on track" with the manufacturing of INO-4800, Kim would only acknowledge that "our focus is squarely on scaling up for 100 million doses that we feel are needed in 2021." With regard to the INO-4800 clinical trials, in Inovio's August 10, 2020 press release and conference call, Defendants disclosed that its planned INO-4800 Phase II/III trial would begin in September 2020 upon FDA concurrence, which indicated there had been a delay from the prior guidance of "summer" of 2020.

122. In response to the August 10, 2020 conference call, the Company's stock price fell from a closing price of $18.99 per share on August 10, 2020 to a closing price of $14.62 on August 11, 2020, on trading volume of nearly 47 million shares. The August 11 share price drop reflected a market capitalization loss of $400 million, and a 23% decline from Inovio's closing price on August 10, 2020.

123. Before the market opened on September 2, 2020, Muddy Waters issued a Tweet noting that the Pennsylvania State court's August 25, 2020 full opinion denying Inovio's motion to force VGXI to hand over VGXI's intellectual property to VGXI's competitors revealed it is "clear that INO lacks manufacturing capacity to get remotely near the purported goal of 1 mm doses in '20

& 100 mm in '21." Further, Muddy Waters noted that Inovio could not compete with Operation Warp Speed candidates (adding "INO is NOT one of the candidates").

124. In response to the Muddy Waters Tweet threads regarding the truth of Inovio's manufacturing capabilities, the Company's stock price experienced a two-day drop, from a closing price of $11.41 on September 1, 2020 to a closing price of $9.85 on September 3, 2020, on two-day trading volume of over 39 million shares. The September 2-3 share price drop reflected a 13.7% decline from Inovio's closing price on September 1, 2020.

125. Before the market opened on September 28, 2020, Inovio issued a press release disclosing that the FDA "has notified the company it has additional questions about the company's planned Phase 2/3 trial of its COVID-19 vaccine candidate INO-4800" and "[u]ntil the FDA's questions have been satisfactorily addressed, INOVIO's Investigational New Drug Application (IND) for the Phase 2/3 trial is on partial clinical trial." While the press release did not disclose that the FDA had informed Inovio of the partial clinical hold more than three months earlier, on June 26, 2020, the market still reacted swiftly and negatively to the September 28, 2020 disclosure. By the close of trading on September 28, 2020, the Company's stock price had fallen on trading volume in excess of 66 million shares from the prior closing price of $16.94 per share to $12.14 per share. The September 28 share price drop reflected a market capitalization loss of over $439 million and a 28% decline from Inovio's closing price on September 25, 2020, the prior trading day.

## ADDITIONAL ALLEGATIONS OF SCIENTER

### Kim's and Kies' Suspicious Common Stock Sales

126. For allegations concerning Kim's and Kies' unusual and suspicious Class Period sales of Inovio common stock, *see* ¶¶29, 33, 111-112.

**Inovio's At-The-Market Stock Offerings**

127. For years leading up to 2020, Inovio repeatedly informed investors that the Company would need to continue to raise capital to fund its operations. The Company had long experienced significant operating losses and warned investors that it expected to continue to incur substantial additional operating losses for several years in the future because Inovio might "never" achieve positive cash flow. Obtaining financing to support the Company's operations, and not just those related to INO-4800, was critical. As reported recently in the Company's 2019 Form 10-K:

> As of December 31, 2019, we had an accumulated deficit of $739.8 million and we expect to continue to operate at a loss for some time. The amount of the accumulated deficit will continue to increase, as it will be expensive to continue research and development efforts. These activities will require additional financing. If these activities are successful and if we receive approval from the FDA to market our DNA vaccine and DNA immunotherapy product candidates, then we will need to raise additional funding to market and sell the approved products and equipment. We cannot predict the outcome of the above matters at this time. We are evaluating potential collaborations as an additional way to fund operations. We believe that our current cash and short-term investments are sufficient to meet our planned working capital requirements for at least the next twelve months.

128. With no material source of revenue in the foreseeable future and increased R&D expenses mounting, Inovio's continued existence as a going concern relies on the amount of capital it can raise through public and private offerings. According to the Company's 2019 Form 10-K, in order to continue its R&D activities, Inovio "will need to seek additional capital [which] may occur through . . . future public or private debt or equity financings . . . . If adequate funds are not available, the Company may need to delay, reduce the scope of or put on hold one or more of its clinical and/or preclinical programs."

129. As a consequence, and following their Class Period false and misleading statements, Defendants launched a series of ATM offerings to fund the Company's continued operations. In an ATM, the issuer places its new shares into the market incrementally, through broker-dealers at market prices. Whereas in the traditional follow-on offering, a fixed number of shares is sold

generally at a fixed price in a single batch. Rather than do a single offering during the Class Period, let alone two offerings, Defendants conducted four ATMs that allowed the Company to raise up to $400 million from investors as they focused on every word Defendants made to the public about the status of INO-4800. A summary of the timing and amounts of those offerings is reflected in the table below:

| FORM 424B5 | |
|---|---|
| **Date Offering Commenced** | **Offering Amount** |
| February 7, 2020 | $100 million |
| March 9, 2020 | $50 million |
| April 3, 2020 | $150 million |
| May 12, 2020 | $100 million |

130. As reiterated in each prospectus, Defendants had to raise funds to pay for "general corporate purposes, including clinical trial expenses, research and development expenses, working capital, general and administrative expenses, manufacturing expenses and potential acquisitions of companies and technologies that complement our business." According to the Company's SEC filings, by June 30, 2020, the Company had raised over $320 million from selling its stock in the ATM offerings.

131. But for Defendants' alleged false and misleading statements regarding the status of the INO-4800 vaccine and the Company's ability to manufacture sufficient doses to the public, Inovio's Class Period stock price would have been substantially lower, and Inovio would have been unable to obtain over $320 million in cash.

**Individual Defendants' Class Period Compensation**

132. The Individual Defendants were motivated to materially misstate the development status of INO-4800, as well as the Company's ability to generate sufficient doses to the public in the future, by the terms of their employment agreements with Inovio. The Individual Defendants' compensation was directly based on a "strong pay-for-performance structure that ties a significant

portion of each executive officer's compensation to corporate performance," such as "[a]dvancing [i]nfectious [d]isease [p]rograms," "raising specific amounts of capital during the year" and the number of "peer-reviewed" publications. These very measures were within the control of the Individual Defendants and they improperly manipulated these performance measures during the Class Period. The personal wealth of the Individual Defendants was enhanced by the dissemination of materially false and misleading statements regarding the developmental and manufacturing status of INO-4800.

133. According to the Company's March 27, 2020 Form DEF 14A Proxy Statement, Inovio's executive compensation package consisted of: (a) base salary; (b) cash incentive compensation; and (c) long-term equity based compensation. The Proxy Statement added that Inovio, in determining the Individual Defendants' compensation, it "place[s] significant emphasis on performance-based incentive compensation that focuses on our executives' efforts to deliver both short-term and long-term value for our stockholders without encouraging excessive risk taking."

134. In 2019, for example, Kim received $837,735 in salary, $457,222 in annual cash incentive compensation, and $638,274 and $642,803 in stock awards and option awards, respectively. In 2019, Kies received $523,285 in salary, $177,833 in annual case incentive compensation, and $215,09 and $216,712 in stock awards and option awards, respectively. Juba's annual compensation data is not publicly reported by Inovio, but Juba's compensation is most likely comprised of salary, annual bonus and equity award components.

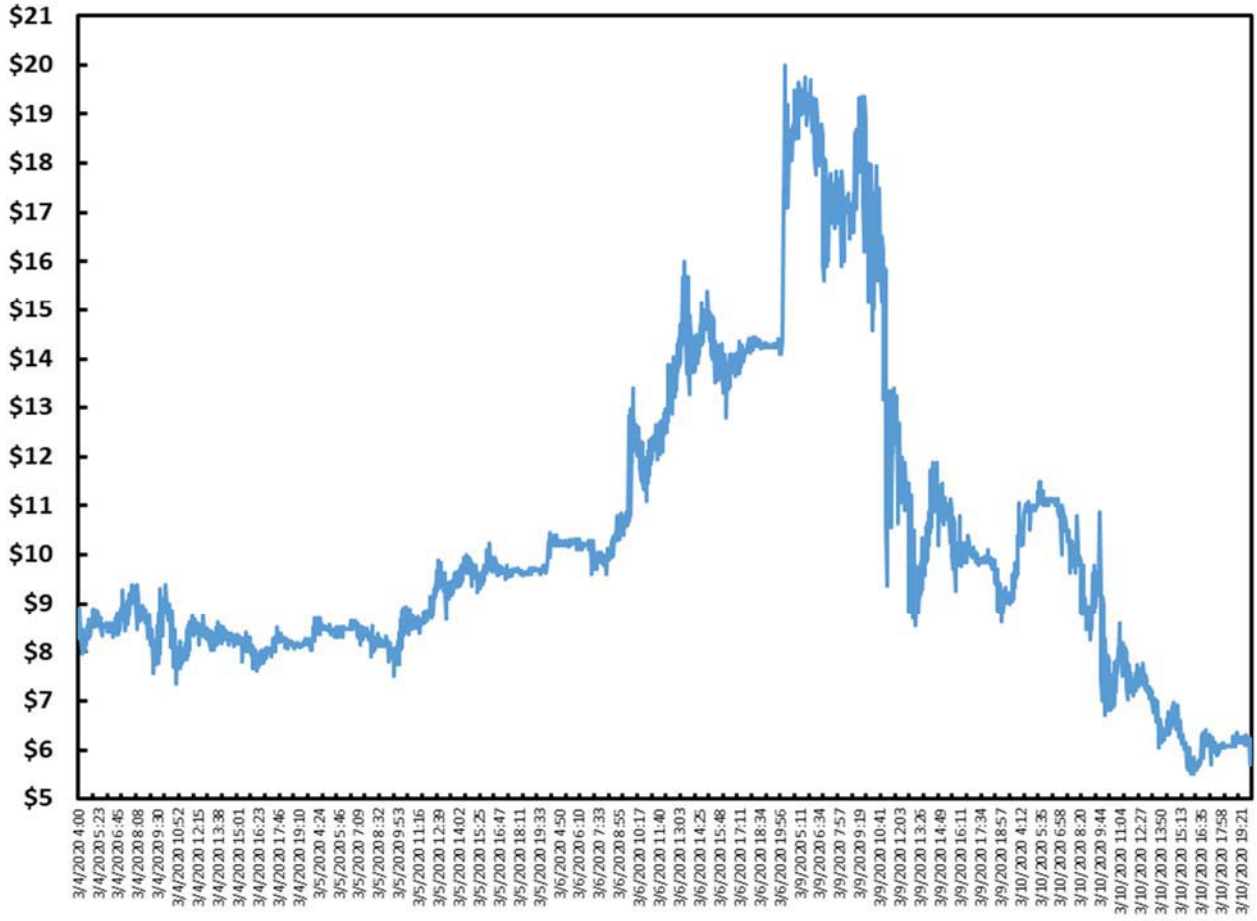
## LOSS CAUSATION AND ECONOMIC LOSS

135. During the Class Period, as detailed herein, Defendants engaged in a scheme to deceive investors and the market, and engaged in a course of conduct that artificially inflated the price of Inovio common stock and operated as fraud or deceit on Class Purchasers of Inovio stock by misrepresenting and omitting material information about the status of INO-4800 vaccine, including,

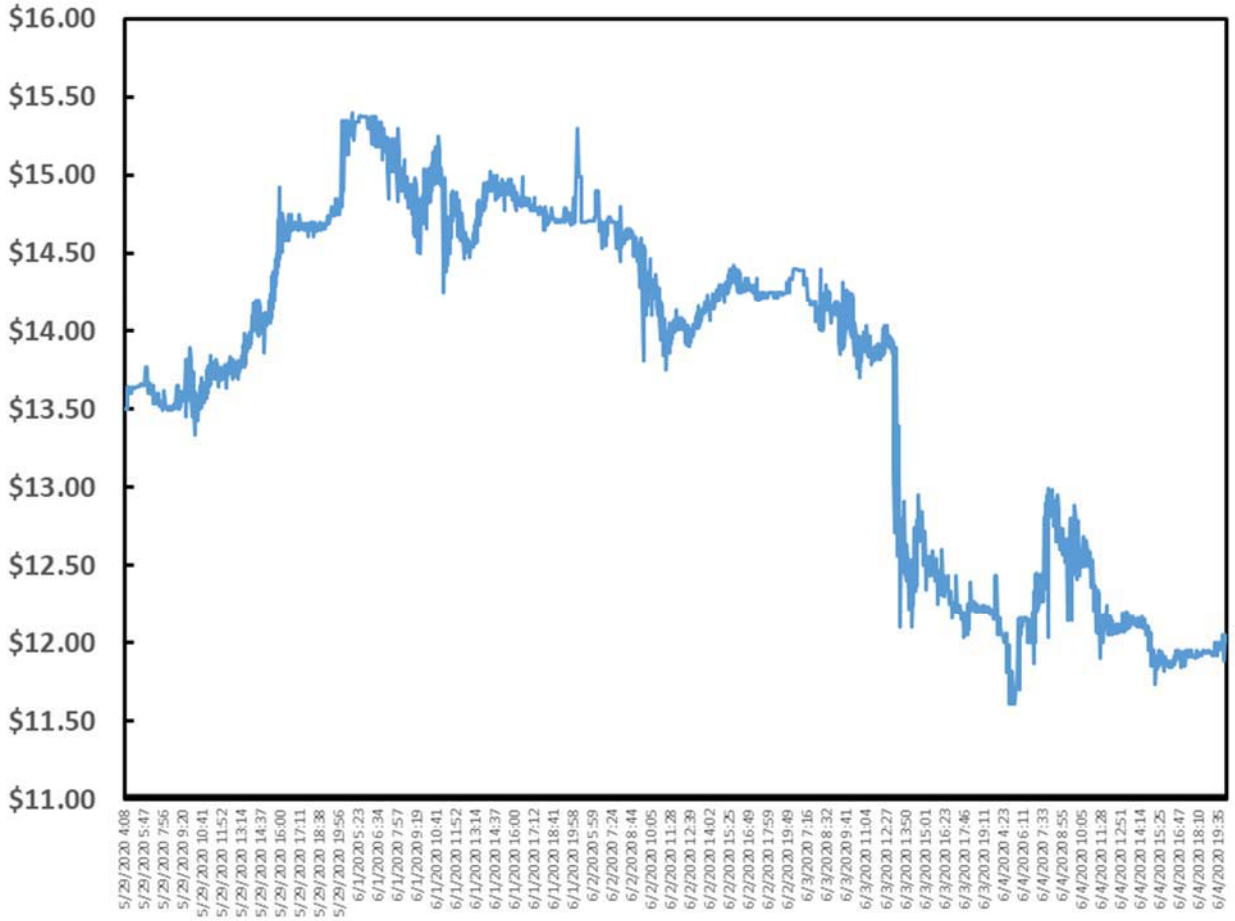
but not limited to, Defendants' assurances that the Company would deliver one million doses of INO-4800 to the public by 2020 (and hundreds of millions of doses each year thereafter). When Defendants' prior misrepresentations and omissions were disclosed or otherwise leaked to the market, beginning on March 9, 2020, Inovio's stock price declined significantly, as the prior inflation came out of the price. As a result of their purchases of Inovio common stock during the Class Period, Plaintiffs and other members of the Class suffered economic loss, *i.e.*, damages, under the federal securities laws.

136. Defendants' false and misleading statements and omissions, identified herein at ¶¶97, 99, 102, 104, 107, 109, 111, 113, had the intended effect and caused Inovio's stock to trade at artificially inflated levels during the Class Period.

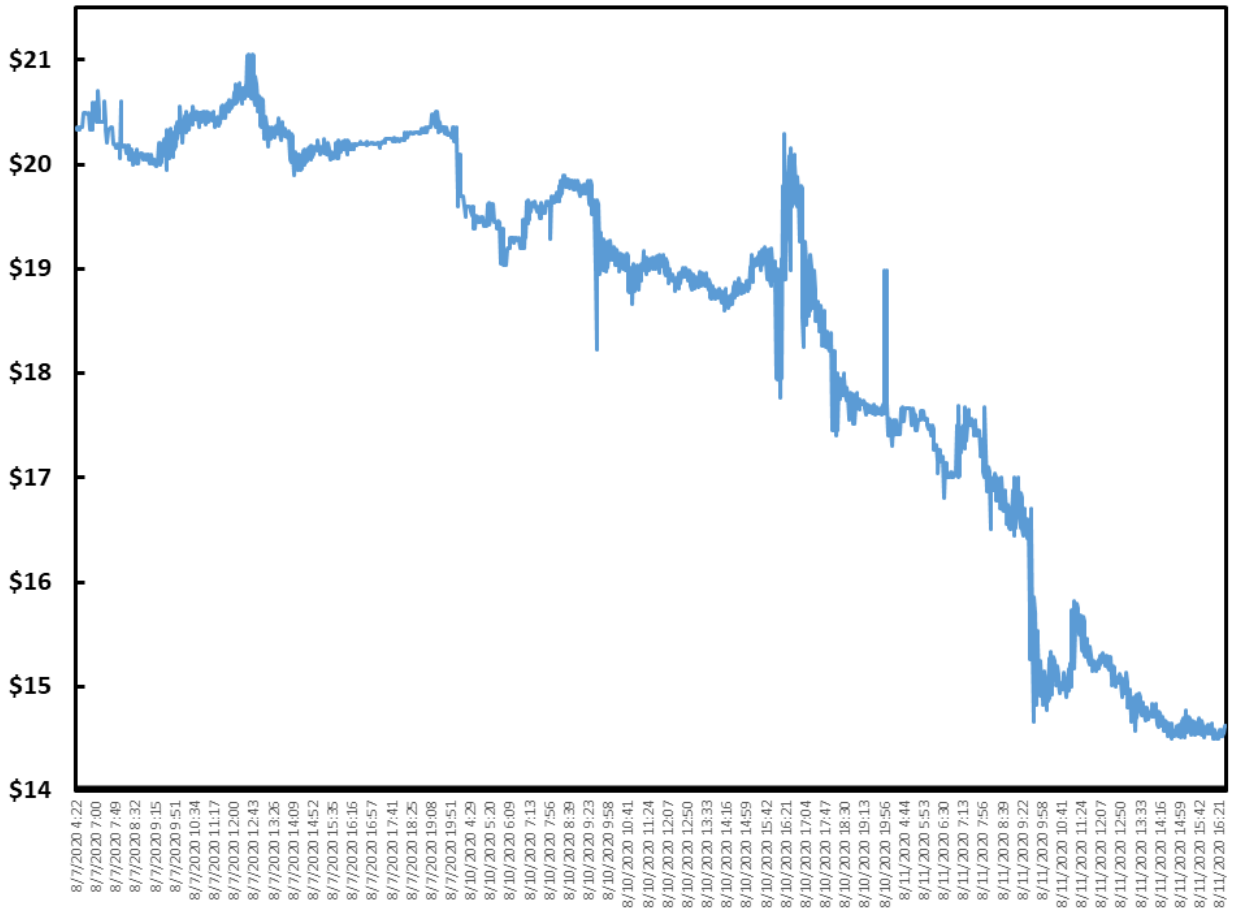
137. As a direct result of the disclosures and leakage that began on March 9, 2020, and are detailed in ¶¶115-116, Inovio's stock price suffered a significant decline. As set forth in the chart below, between March 9 and 10, 2020, the price of Inovio common stock traded on the Nasdaq dropped by $13.02 per share, or 59.5%:



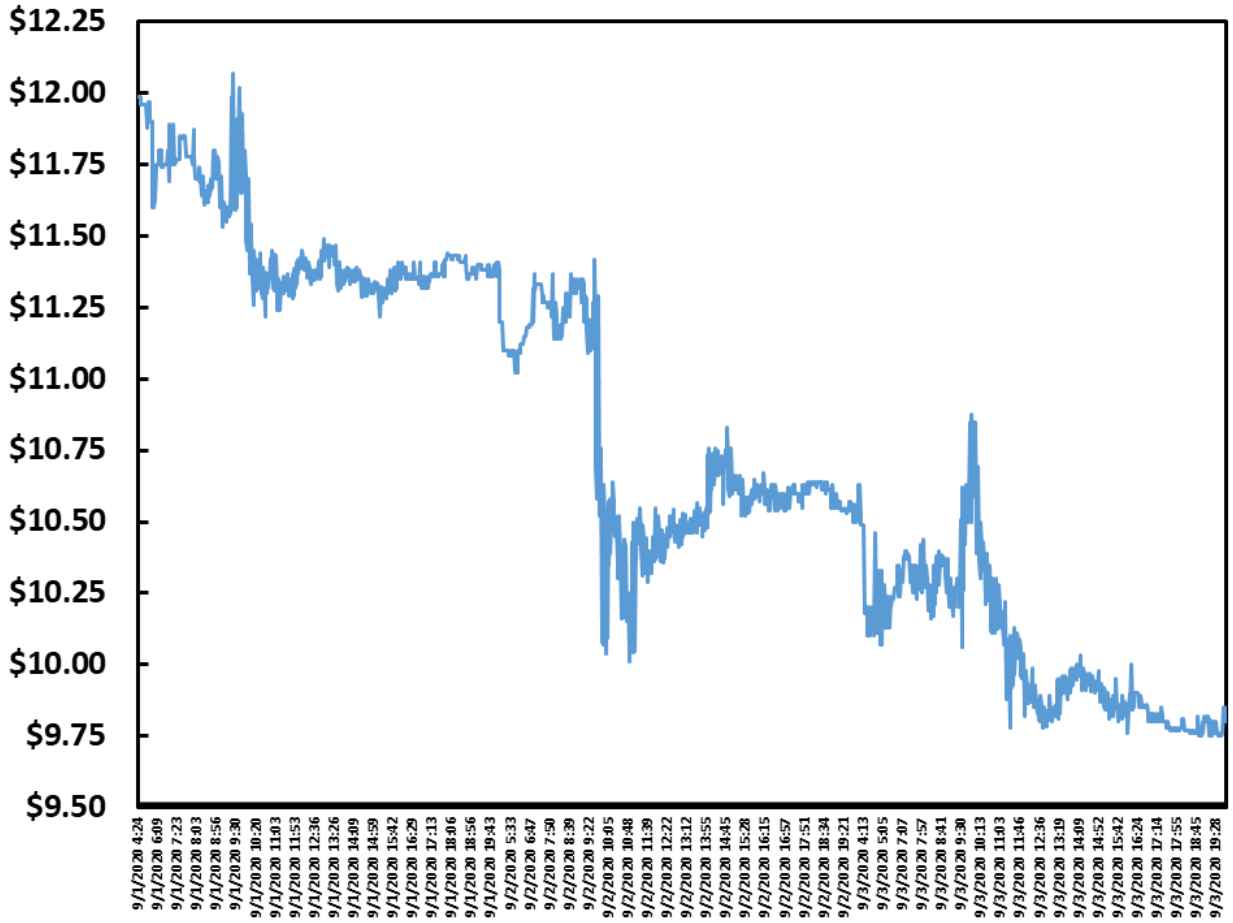
138. The disclosures and leakage of information on June 3, 2020, detailed in ¶118, also had a direct impact on Inovio's common stock price. As set forth in the chart below, the price of Inovio common stock dropped by $2.46 per share between June 3 and 4, 2020, or 17.2%.



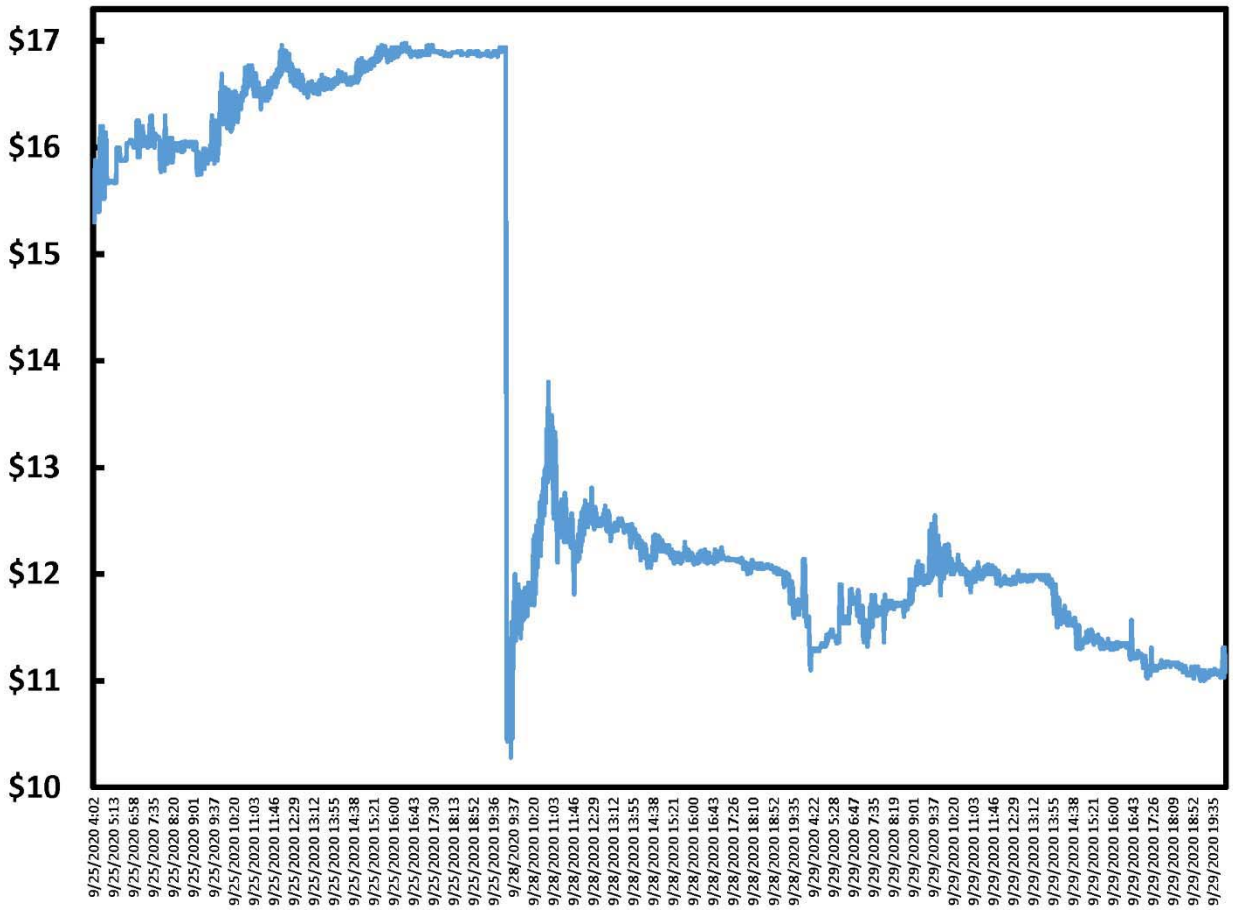
139. The disclosures and leakage of information on August 10, 2020, detailed in ¶¶121-122, also had a direct impact on Inovio's common stock price. As set forth in the chart below, the price of Inovio's common stock dropped by $4.37 per share between August 10 and 11, 2020, or 23%.



140. The disclosures and leakage of information on September 2, 2020, detailed in ¶123, also had a direct impact on Inovio's common stock price. As set forth in the chart below, the price of Inovio's stock price dropped 13.7% on September 2 and 3, 2020.



141. The disclosures and leakage of information on September 28, 2020, detailed in ¶125, also had a direct impact on Inovio's common stock price. As set forth in the chart below, the price of Inovio's common stock dropped by $4.80 per share on September 28, 2020, or 28%.




142. The declines in Inovio's common stock price, set forth above, were a direct result of the nature and extent of Defendants' prior misstatements and omissions being revealed to investors and the market. The timing and magnitude of Inovio's stock price decline negate any inference that the losses suffered by Plaintiffs and other Class members were caused by changed market conditions, macroeconomic or industry factors or Company-specific factors unrelated to Defendants' fraudulent conduct. Between March 9 and 10, 2020, the Nasdaq was down 2.70% and the Dow Jones U.S. Pharmaceuticals Index ("DJUSPR") was down 1.21% (versus Inovio's two-day decline of 59.5%), between June 3-4, 2020, the Nasdaq was relatively unchanged, while the DJUSPR was

down 0.50% (versus Inovio's two-day decline of 17.2%). Between August 10-11 2020, the Nasdaq was down 2.1%, while the DJUSPR was relatively unchanged (versus Inovio's two-day decline of 28%). Between September 2-3, 2020, the Nasdaq was down 2.0%, while the DJUSPR was relatively unchanged (versus Inovio's two-day decline of 13.7%). Between September 25-29, 2020, the Nasdaq was up 1.6% and the DJUSPR was up 0.1% (versus Inovio's two-day decline of 33.2%).

143. The economic losses suffered by Plaintiffs and other members of the Class were a direct result of Defendants' fraudulent scheme to inflate Inovio's common stock price and the subsequent declines in the value of that stock when Defendants' prior misrepresentations and omissions were revealed.

**PRESUMPTION OF RELIANCE**

144. Plaintiffs and the Class are entitled to a presumption of reliance pursuant to *Basic Inc. v. Levinson*, 485 U.S. 224 (1988), and the fraud-on-the-market doctrine because, during the Class Period, Inovio stock traded in an efficient market on the Nasdaq, the material misstatements and omissions alleged herein would induce a reasonable investor to misjudge the value of Inovio stock and without knowledge of the misrepresented or omitted material facts, Plaintiffs and other members of the Class purchased or acquired Inovio stock between the time Defendants misrepresented and failed to disclose material facts about the status of INO-4800 vaccine development and the time the true facts were disclosed. Accordingly, Plaintiffs and other members of the Class relied, and are entitled to have relied, upon the integrity of the market for Inovio common stock, and are entitled to a presumption of reliance on Defendants' materially false and misleading statements and omissions during the Class Period.

145. Plaintiffs and the Class are also entitled to a presumption of reliance under *Affiliated Ute Citizens v. United States*, 406 U.S. 128 (1972), because the claims asserted herein against Defendants are predicated upon omissions of material fact for which there was a duty to disclose.

## CLASS ACTION ALLEGATIONS

146. Plaintiffs bring this action as a class action pursuant to Rule 23 of the Federal Rules of Civil Procedure on behalf of all persons or entities who purchased or otherwise acquired the common stock of Inovio between February 14, 2020 and August 10, 2020, inclusive (the "Class"). Excluded from the Class are Defendants and their families, the officers and directors of Inovio, members of their immediate families and their legal representatives, heirs, successors or assigns, and any entity in which Defendants have or had a controlling interest.

147. The members of the Class are so numerous that joinder of all members is impracticable. The disposition of their claims in a class action will provide substantial benefits to the parties and the Court. Throughout the Class Period, Inovio common stock was actively traded on the Nasdaq, one of the largest stock exchanges in the world. While the exact number of Class members is unknown to Plaintiffs at this time and can only be ascertained through appropriate discovery, Plaintiffs believe that there are thousands of members in the proposed Class. During the Class Period, there were more than 100 million shares of Inovio common stock outstanding and the average daily trading volume was over 30 million shares. Record owners and other members of the Class may be identified from records maintained by Inovio or its transfer agent(s) and may be notified of the pendency of this action using the form of notice similar to that customarily used in securities class actions.

148. There is a well-defined community of interest in the questions of law and fact involved in this case. Common questions of law and fact exist as to all members of the Class and predominate over any questions solely affecting individual members of the Class. Among the questions of law and fact common to the Class are:

(a) Whether the federal securities laws were violated by Defendants' acts, omissions and common scheme to defraud as alleged herein;

(b) Whether statements made by Defendants to the investing public during the Class Period misrepresented and omitted material facts about INO-4800; and

(c) To what extent the members of the Class have sustained damages and the proper measure of damages.

149. Plaintiffs' claims are typical of those of the Class because Plaintiffs and the Class sustained damages as a result of Defendants' wrongful conduct.

150. Plaintiffs will adequately protect the interests of the Class and has retained counsel who is experienced in securities and class action litigation. Plaintiffs have no interests which conflict with those of the Class.

151. A class action is superior to all other available methods for the fair and efficient adjudication of this controversy since joinder of all members is impracticable. Furthermore, as the damages suffered by individual Class members may be relatively small, the expense and burden of individual litigation makes it impossible for all members of the Class to individually redress the wrongs done to them. There will be no difficulty in the management of this action as a class action.

**COUNT I**

**For Violation of §10(b) of the Exchange Act and Rule 10b-5 Against Defendants Inovio, Kim, and Kies**

152. Plaintiffs repeat and reallege each and every allegation contained above as if fully set forth herein. Count I is brought pursuant to §10(b) of the Exchange Act, 15 U.S.C. §78j(b), and Rule 10b-5 promulgated thereunder, 17 C.F.R. §240.10b-5.

153. During the Class Period, Inovio, through its officers, management and agents, including Kim and Kies, made or were responsible for the statements specified in ¶¶97, 99, 102, 104, 107, 109, 111, 113, which they knew or recklessly disregarded were misleading in that they failed to disclose material facts necessary in order to make the statements made, in light of the circumstances under which they were made, not misleading.

154. Defendants and the Company's officers, management and agents directly and indirectly, by the use of means and instrumentalities of interstate commerce, the mails and/or the facilities of a national securities exchange: (a) employed devices, schemes and artifices to defraud; (b) made misleading statements and omitted to state material facts necessary in order to make the statements made, in light of the circumstances under which they were made, not misleading; or (c) engaged in acts, practices and a course of business that operated as fraud or deceit upon Plaintiffs and others similarly situated in connection with their purchases of Inovio common stock during the Class Period. All Defendants are sued as primary participants in the wrongful and illegal conduct charged herein and as controlling persons as alleged below.

155. Defendants and the Company's officers, management and agents did not have a reasonable basis for their alleged false statements and engaged in transactions, practices and a course of business which operated as a fraud and deceit upon the purchasers of Inovio common stock during the Class Period.

156. Inovio is liable for all materially false and misleading statements and omissions made during the Class Period, as alleged above, including the false and misleading statements made by the Company's officers and agents, as alleged above, as the maker of such statements and under the principle of *respondeat superior*.

157. Defendants and the Company's officers, management and agents, individually and in concert, directly and indirectly, engaged and participated in a continuous course of conduct to conceal adverse material information about the status of the INO-4800 DNA vaccine.

158. The allegations above establish a strong inference that Inovio, as an entity, acted with corporate scienter throughout the Class Period, as its officers and agents had actual knowledge of the misrepresentations and omissions of material facts set forth herein, or acted with reckless disregard for the truth because they failed to ascertain and to disclose such facts, even though such facts were

available to them. Such material misrepresentations and omissions were done knowingly or with recklessness, and without a reasonable basis, for the purpose and effect of concealing the truth about the status of the INO-4800 DNA vaccine. By concealing these material facts from investors, Inovio's share price was artificially inflated during the Class Period.

159. Defendants had actual knowledge of the misrepresentations and omissions of material facts set forth herein, or acted with reckless disregard for the truth in that they failed to ascertain and to disclose such facts, even though such facts were available to them. Defendants' material misrepresentations and/or omissions were done knowingly or recklessly and for the purpose and effect of concealing the truth about the INO-4800 DNA vaccine and artificially inflating the price of Inovio's common stock.

160. Plaintiffs and the Class have suffered damages in that, in reliance on the integrity of the market, they paid artificially inflated prices for Inovio common stock. Plaintiffs and the Class would not have purchased Inovio common stock at the prices they paid, or at all, if they had been aware that the market prices had been artificially and falsely inflated by Defendants' misleading statements and omissions.

161. As a direct and proximate result of Defendants' wrongful conduct, Plaintiffs and the other members of the Class suffered damages in connection with their purchases of Inovio common stock during the Class Period.

**COUNT II**

**For Violation of §20(a) of the Exchange Act Against All Defendants**

162. Plaintiffs repeat and reallege each and every allegation contained above as if fully set forth herein. Count II is brought pursuant to §20(a) of the Exchange Act, 15 U.S.C. §78t(a).

163. Kim, Kies, and Juba acted as controlling persons of Inovio within the meaning of §20(a) of the Exchange Act. Inovio controlled all of its employees and Kim, Kies, and Juba. By

virtue of their high-level positions, and their ownership and contractual rights, participation in and awareness of the status of the INO-4800 DNA vaccine, as well as their intimate knowledge of the false statements and omissions made by the Company and disseminated to the investing public, Defendants Kim and Kies had the power to influence and control and did influence and control, directly or indirectly, the Company's decision-making, including the content and dissemination of the various statements which Plaintiffs contend are false and misleading. Kim, Kies, and Juba participated in interviews and conference calls with investors and analysts, described herein at ¶¶97, 99, 104, 113 and/or prepared and approved the Company's public statements, SEC filings and press releases, described herein at ¶¶102, 107, 109, 113, alleged by Plaintiffs to be misleading.

164. In particular, Defendants had direct and supervisory involvement in the Company's day-to-day operations and, therefore, are presumed to have had the power to control or influence the particular transactions giving rise to the securities violations as alleged herein, and exercised the same. By reason of such conduct, Defendants are liable pursuant to §20(a).

165. As set forth above, Defendants each violated §10(b) and Rule 10b-5 by their acts and omissions as alleged in this complaint. By virtue of their positions as controlling persons, Defendants are liable pursuant to §20(a) of the Exchange Act. As a direct and proximate result of Defendants' wrongful conduct, Plaintiffs and other members of the Class suffered damages in connection with their purchases of Inovio common stock during the Class Period.

**PRAYER FOR RELIEF**

A. Determining that this action is a proper class action, and certifying Plaintiffs as class representatives under Federal Rule of Civil Procedure 23 and Plaintiffs' counsel as Class counsel;

B. Awarding compensatory damages in favor of Plaintiffs and the other members of the Class against all Defendants, jointly and severally, for all damages sustained as a result of

Defendants' violations of the federal securities laws, in an amount to be proven at trial, including interest thereon;

C. Awarding Plaintiffs and the Class their reasonable costs and expenses incurred in this action, including counsel fees and expert fees; and

D. Such equitable, injunctive or other and further relief as the Court may deem just and proper, including, but not limited to, rescission.

**JURY DEMAND**

Plaintiffs hereby demand a trial by jury.

DATED: January 28, 2022

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